MAKERERE UNIVERSITY

REPORTING LEVELS OF VILLAGE HEALTH TEAMS: BARRIERS, FACILITATORS AND ASSOCIATED FACTORS IN NAKAPIRIPIRIT DISTRICT.

BY

ELIZABETH KATANA BABIRYE, BSc Med Rad (MAK)

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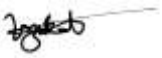
DECLARATION

I hereby declare that all the work in this dissertation is original unless otherwise acknowledged and has not been previously submitted for another academic award at any other institution of higher learning.



Signature…… …… Date……05/10/2018……

Elizabeth Katana Babirye (Principal investigator)

This dissertation has been submitted for examination with the approval of the following supervisors

1. Assoc Prof. Joan N Kalyango

Signature……. Date……05/10/2018……

2. Dr Christine Nalwadda

Signature…… …. Date……05/10/2018……

DEDICATION

This book is dedicated to all community health volunteers in Uganda.

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Special thanks go to my supervisors Prof Joan N Kalyango and Dr Christine Nalwadda, for their tremendous support and input in this work. May God reward you.

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LIST OF ACRONYMS

CEU	Clinical Epidemiology Unit
CHEW(s)	Community Health Extension Worker(s)
CI	Confidence Interval
CUAMM	Doctors with Africa
CHIS	Community Health Information Systems
CHW(s)	Community Health Worker(s)
DHIS2	District Health Information System 2
DHO	District Health Office
FGD(s)	Focus Group Discussions
HMIS	Health Management Information System
HSD(s)	Health Sub District(s)
HSSIP	Health Sector Strategic and Investment Plan
iCCM	Integrated Community Case Management
KII(s)	Key Informant Interview(s)
MOH	Ministry of Health
PI	Principal Investigator
SOMREC	School of Medicine Research Ethics Committee
UNCST	Uganda National Council of Science and Technology
VHT(s)	Village Health Team(s)
WHO	World Health Organization

OPERATIONAL DEFINITIONS

Community: a social unit, such as a group of people, who have something in common, such as norms, values, or identity. Usually share a sense of place that is situated in a given geographical area, such as village or neighborhood (WHO, 2001)

Community Health Workers (CHWs): should be members of the communities where they work, selected by the communities, answerable to the communities for their activities, supported by the health system but not necessarily a part of its organization, and have shorter training than professional workers (WHO, 1989)

Community Health Information System (CHIS): is a combination of paper, software, hardware, people and process which seeks to support informed decision making and action taking of CHWs. It includes recording of basic data such as population, health program transactions, case based data, stock and resource availability (WHO, 2001)

A Village Health Team (VHT) member: must be an individual above 18 years of age, volunteer, a village resident, chosen by the community, trusted community member, able to read and write in the local language and a good community mobilizer (MOH 2001)

VHT/iCCM Reporting Levels

Submission levels: total number of VHT/iCCM reports submitted by the health facilities to DHIS2 in relation to those expected from the health facilities per quarter

Completeness levels: total number of filled data elements/cells of submitted VHT/iCCM reports in relation to the total number data elements/cells expected to be filled for a submitted report.

Timeliness levels; total number of VHT/iCCM reports submitted by the health facilities to DHIS2 before the deadline (on or before the seventh day of the reporting month) in relation to the total number of expected reports

Hierarchical VHT reporting system: The VHT/iCCM reporting system is classified or arranged to follow a successive criteria or pattern as follows: from the village by the assigned VHT supervisors through the parish by health facilities, then to the district level through the integration of VHT/iCCM in the District Health Information System (DHIS2)

ABSTRACT

Introduction: Developing skilled Community Health Workers programs that are incorporated with efficient Community Health Information Systems is fundamental for the efficiency of the programs, event notification, as well as planning and monitoring at all levels. The VHT/iCCM reporting consequently impacts on decision making processes, as well as monitoring and planning for the communities at both district and national levels. The aim of this study was to assess VHT/iCCM reporting (submission, completeness and timeliness levels) in Nakapiripirit, Uganda for the period of January to December 2017. This was followed by identification of associated factors, and exploring potential barriers and facilitators of the reporting process.

Methods: We conducted a cross-sectional study with both quantitative and qualitative methods of data collection at the health facilities in Nakapiripirit district. We extracted secondary data from DHIS2 on VHT/iCCM reports submitted for the period of January to December 2017. We used simple random sampling to sample a total of 14 health facilities from a sampling frame of 17 health facilities and conveniently sampled a total of 266 VHTs. Interviewer administered questionnaires were used to collect data from VHT members and health facilities. We also conducted 12 Key Informant Interviews including peer VHT supervisors, health facility and district supervisors, in addition to 3 Focus Group Discussions with VHT members. Multiple linear regression was used to analyze the factors associated with the reporting levels with adjustment for clustering in the data. The findings from both the qualitative and quantitative methods were combined at the discussion level to make inference of the study results. Ethical approval to conduct this study was obtained from CEU, SOMREC, UNCST and the DHO of Nakapiripirit.

Results: The mean overall report submission level was 89.5, while mean completeness was 78.2 and mean timeliness was at 13.9. HC IVs had the highest submission and completeness levels,

HC IIIs had the highest timeliness levels and HC IIs had the lowest timeliness levels. The factors that were associated with higher submission levels were higher facility level (P<0.001), livelihood zone (P<0.001) and age (P=0.023) while those associated with completeness were higher facility level (P<0.001) and higher age (P=0.017). Higher facility level (P<0.001) was the major factor associated with higher timeliness levels. Irregular conduct of meetings, seasonal changes and migrations, inadequate trainings, poor incentivisation and peer supervision were key barriers and facilitators of the reporting levels.

Conclusion: There were relatively high levels for submission and completeness of VHT/iCCM reports in Nakapiripirit district, but with very low levels for timeliness. The age of the VHT member, the level of the health facility and the livelihood zone of the community had significant effects on the reporting levels. Irregular conduct of VHT meetings, inadequate trainings, seasonal changes with continuous migrations and illiteracy were major barriers of VHT/iCCM reporting. While incentivisation, supervisions and motivation were major facilitators of VHT/iCCM reporting.

CHAPTER ONE: INTRODUCTION

1.1 BACKGROUND

The World Health Organization (WHO) has a goal of Universal Health Coverage (UHC) to ensure that all individuals have access to quality and essential health services by 2030 which is in line with the United Nations' third Sustainable Development Goal (WHO, 2016).

Recognizing the problem of Human Resources for Health (HRH) and also that many individuals in resource limited settings do not seek formal health care services but manage illnesses in communities, WHO recommends countries to adopt sustainable and skilled Community Health Workers (CHWs) programs that are incorporated with Community Health Information Systems (WHO, 2016, 2017).

Community Health Workers programs should involve selection of community health aides, who can be men or women, young or old, literate or illiterate, trained and working within their communities and must be implemented in response to local societal and cultural norms or customs to ensure community acceptance and ownership (Health, 2007).

In Sub Saharan Africa, there has been a substantial uptake of the CHWs programs in the majority of the countries; however their exact roles and responsibilities vary from country to country and within the countries from program to program since there is no international standard type. This makes generalizations about the profile and functionality of CHWs internationally challenging (Health, 2007; WHO, 2017).

In Uganda, the Ministry of Health (MOH) implemented the Village Health Team (VHT) program in 2001 that has since been active countrywide with community selection of volunteers trained to work together to provide basic health promotion, prevention, community mobilization and referral

services. The VHT strategy was modified in July 2010 to include Integrated Community Case Management(iCCM) services that are provided by some of the VHT members (MOH, 2001, 2015b).

With financial support from DFID, UNICEF, through the Malaria Consortium and the MOH, iCCM was implemented in 34 out of a total of 112 districts in the country (about 30%) since 2010, as of December 2014. In Nakapiripirit, the program is currently supported by UNICEF. There is a proposed pending scaling up of iCCM to an additional 35 more districts to be covered under Global Fund (33 districts) and President's Malaria Initiative (2 districts) (USAID, 2015).

Integrated Community Case Management (iCCM) has an objective to minimize community case fatalities by empowering VHT members to identify danger signs and refer cases, diagnose and treat illnesses such as malaria among other activities. VHTs contribute to community disease surveillance, planning and monitoring through active, complete and timely data collection using registers using a hierarchical reporting process(MOH, 2001, 2010).

Previous assessments of general VHT functionality and performance have shown that their reporting process can be influenced by several factors acting at individual, health system and community levels. Factors such as literacy, age and sex of VHT member, refresher trainings, presence of reporting tools, household coverage, supervisions etc. can affect the VHT reporting process and general performance (Babughirana Geoffrey, 2017; Kimbugwe et al., 2014; MOH, 2015b; Yoshito Kawakatsu, 2012).

Nakapiripirit was chosen an an important setting as it forms the largest part of southern rural Karamoja and the factors associated with the VHT/iCCM reporting process had not yet been

investigated. The aim of the study was to assess VHT/iCCM reporting (submission, completeness and timeliness levels) in Nakapiripirit district for the period of January to December 2017. The study also further evaluated the associated factors as well as the barriers and facilitators.

1.2 RESEARCH PROBLEM

The VHT/iCCM reporting process has continued to be poor countrywide including Nakapiripirit district. Only 50 % of health facilities in Nakapiripirit had VHT/iCCM data reported to the MOH through DHIS2 coupled with incompleteness and untimeliness of submitted reports for the period of January to June 2017 (DHIS2 2017). The national assessment of VHTs in 2015 identified high levels of illiteracy, inadequate reporting tools and training as the major challenges faced by the VHT/iCCM program in Karamoja region (MOH, 2015b). Nakapiripirit forms the greater part of southern rural Karamoja with no hospital and its population depending majorly on health center IIs and VHTs and therefore the magnitude of these challenges is likely to be greater than that of its counterparts. Poor reporting by the VHT strategy will consequently result in ineffective planning for the communities, decision making and monitoring at both district and national levels. A standard hierarchical reporting system that involves VHT members recording information routinely in their registers, then forwarding the information to their supervisors who in turn submit it to the health facilities, then to the district level through the integration of VHT/iCCM in the DHIS2 was developed for use by the VHTs; however there was need for further exploration of the reporting process, barriers, facilitators and factors associated with the poor reporting levels.

1.3 JUSTIFICATION

The VHT/iCCM policy stipulates a paper-based hierarchical VHT reporting process coupled with meetings at the health unit for supervision and sharing the information at least every month. Following its national assessment, the VHT strategy was rendered ineffective after 15 years of implementation which has prompted the MOH to upgrade to the Community Health Extension Workers (CHEWs) program in the next five years in order to address its existing and emerging challenges. However the CHEWs may take a longer time to materialize in most rural areas such as Nakapiripirit that may have to lean longer on the VHT strategy (MOH, 2016).

Furthermore due to the growing global concern on developing effective CHWs programs, WHO is in the process of developing guidelines to assist governments and partners, to improve their design, implementation, performance and evaluation (WHO, 2016, 2017).

This study sought to determine the submission, completeness and timeliness levels of VHT/iCCM reports: barriers, facilitators and associated factors to contribute to this knowledge gap. The findings from the study can be of help to inform district and national stakeholders in improving the reporting functions of VHTs and upcoming CHEWs as a key step towards improving community health. The study will also inform behavioral change strategies or interventions aimed at promoting the VHT/iCCM reporting process.

1.4 RESEARCH QUESTIONS

1. What are the submission, completeness and timeliness levels of VHT/iCCM reports in Nakapiripirit district for the period of January to December 2017?
2. What are the factors associated with VHT/iCCM reporting in Nakapiripirit district?
3. What are the barriers and facilitators of VHT/iCMM reporting in Nakapiripirit district?

1.5 STUDY OBJECTIVES

1.5.1 GENERAL OBJECTIVE

To assess VHT/iCCM reporting: barriers, facilitators and associated factors in Nakapiripirit district.

1.5.2 SPECIFIC OBJECTIVES

1. To assess VHT/iCCM reporting (submission, completeness and timeliness levels) in Nakapiripirit district for the period of January to December 2017.
2. To identify the factors associated with VHT/iCCM reporting in Nakapiripirit district.
3. To explore the barriers and facilitators of VHT/iCCM reporting in Nakapiripirit district.

1.6 CONCEPTUAL FRAMEWORK

The conceptual framework shows independent factors that may potentially affect or influence VHT/iCCM reporting and the likely consequences or outcomes. These are categorized into domains of socio-demographic, socio-economic, community factors, health system and individual's knowledge and perceptions.

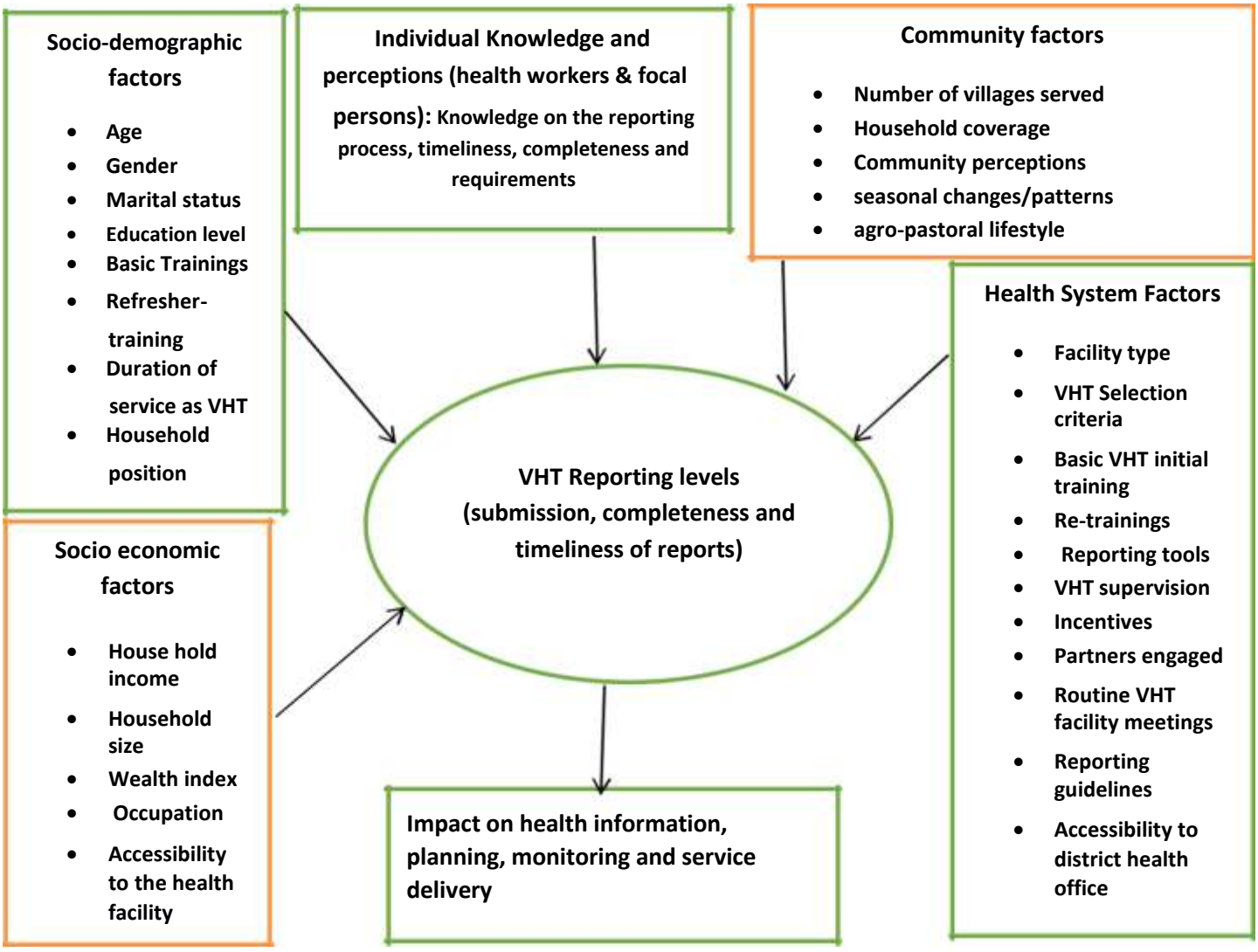

Figure 1 Conceptual framework showing factors potentially associated and influencing VHT/iCCM reporting in Nakapiripirit district.

1.6.1 SCOPE OF THE STUDY

All the independent factors in the conceptual framework were considered in the study. Objectives one and two focused on the socio-demographic, socio-economic, community and health system factors. Objective three focused on community factors and the individual's knowledge and perceptions**.** The study also focused on the association between the independent factors with the reporting levels (submission, timeliness and completeness).

CHAPTER TWO: LITERATURE REVIEW

2.1 Village Health Team Strategy

VHTs in Uganda are equivalent to the WHO's CHWs cadre and are structured to constitute a virtual Health Centre Level I organized on the basis volunteerism. The CHW serves about 30 households, does not receive any salary, no written government contracts and no formal mechanisms for transfer or career progression (Babughirana Geoffrey, 2017; MOH, 2001; Turinawe et al., 2015).

Countrywide, VHTs are expected to carry out general tasks in all Primary Health Care core areas which include: home visiting; mobilization of communities for utilization of health services; health promotion and education; management of common illnesses; follow-up of pregnant mothers, newborns, discharged patients and those on long-term treatment and community information management (Babughirana Geoffrey, 2017; MOH, 2001).

VHTs contribute to community disease surveillance through active data collection and reporting thus forming Uganda's Community Health Information System (CHIS) that eventually feeds into the DHIS2 in conjunction with the Routine Health Information System (RHIS) from health facilities (HISP at the University of Oslo, 2017).

To enable their functionality, VHTs receive mandatory initial basic training on a range of subjects that include interpersonal communication, community mobilization and empowerment, child growth and development, control of communicable diseases, sexual and reproductive health, environmental health, mental health and monitoring record keeping (Babughirana Geoffrey, 2017; MOH, 2001).

The potential of VHTs in Uganda to contribute to stronger and more effective health systems has been documented by various studies and assessments on their general performance and functionality(Babughirana Geoffrey, 2017; Kimbugwe et al., 2014; Perry, Zulliger, & Rogers, 2014; Turinawe et al., 2015).

Approaches to measurement of their general performance and functionality have been varied with some studies focusing on individual VHT level parameters such as demographics, self-esteem, motivation, attitudes, etc. Other studies focus on health system level using parameters such as selection criteria, supervisions, partners, etc. but have not extensively explored the reporting process (Babughirana Geoffrey, 2017).

2.2 VHT/iCCM Reporting

There is need to prioritize VHT/iCCM data to improve informed decision making at all levels since VHTs are strongly relied on to provide a wide range of home and community based services (COALITION, 2016). VHTs are therefore trained and expected to record information on the health of every household member in their community which involves taking notes on all community health practices into a register that is provided by the health facility (MOH, 2001). They are expected to forward VHT register information to their assigned supervisors and meeting at the health unit for supervision and sharing the information at least every month(MOH, 2001, 2010).

Reporting is an important component of their functionality as it provides a summary of records for each village which is added to health unit and district information. It keeps track of their activities, notes routine behavior changes in the community and stake holders such as development partners and MOH can utilize the information to know which health problems are at community level for planning and monitoring purposes (MOH, 2001, 2015b).

A cross-sectional multicenter study done in Ethiopia, Malawi and Mali to assess the ability of CHWs to report accurately on births and deaths showed that they can collect complete and high-quality vital information on vital events that is useful for monitoring, planning and decision making processes. (Silva et al., 2016).

2.3 Barriers, facilitators and factors associated with the reporting process

2.3.1 Socio-demographic factors

A cross sectional study involving 750 CHWs to assess their reporting rates in Kisumu, Kenya: identified age; as older CHWs were likely to perform better than their counterparts with regards to reporting. In addition to that sex had an influence with females reporting better than males, married CHWs performed better, while those with higher education levels showed better performance in reporting (Yoshito Kawakatsu, 2012). However the influence and magnitude of these factors may differ due to the difference in setting and reporting systems between Nakapiripirit and Kisumu.

Another cross sectional study involving 120 health workers in primary health care facilities that collect data manually in Benin showed that socio demographic characteristics such as age, gender, level of education, regular trainings and individual perceptions towards the HIS process and activities were significantly associated with the quality of data collected as well as the overall performance of the HIS system(Glèlè Ahanhanzo et al., 2014).

2.3.2 Socio-economic factors

Factors such as house hold characteristics (wealth index), house hold size of the VHT member, income, occupation and other responsibilities in addition to VHT work, other house hold practices such as availability of supporters for household chores and good sanitation practices have shown great importance in selection of CHWs that can meet all required performance

expectations(Yoshito Kawakatsu, 2012). Wealth inequality within populations as well as health workers has been pointed out as a key barrier in achieving Universal Health Coverage among rural communities in Sub Saharan Africa especially in community health service delivery; therefore bridging the gaps in wealth related inequality among the CHWs can motivate and improve their performance and functionality (WHO, 2011).

2.3.3 Community factors

Karamoja faces a variety of livelihood, developmental and climactic changes, and it is therefore important for research conducted in Nakapiripirit to have an explorative aspect of agro-pastoral dynamics and community settlement patterns within the region in order to understand how these affect health care delivery systems such as the VHT/iCCM strategy (Aklilu, 2016). Districts in Karamoja have been classified into six livelihood regions that include: sorghum and livestock zones (where livestock are more important than crops and this forms the majority i.e. sixty percent of the Karamoja population), mountain slopes maize and cattle zones (livestock is the basis with a slight shift into some crop farming), highlands apiculture zones (dominantly crop production and honey with limited livestock), low land cattle and maize livelihood zones (equal participation in both livestock and crop production), and the mixed crop farming zones (have fertile soils with abundant crop production and limited livestock(FEWSNET, 2010). In addition to the livelihood zones, other community factors that may affect the VHT/iCCM reporting and performance include number of villages and households covered by the VHT, community respect, perceptions, involvement and knowledge towards VHT performance, seasonal changes and patterns, etc. (Condo et al., 2014).

2.3.4 Health system factors

A case study on monitoring CHIS in Kenya reported that having lengthy paper based systems and several data sources linked with DHIS2 hindered proper functionality of the Health Information Systems and advocated for a need to appropriately shorten reporting hierarchies (UNC, September 2017) .

Another study on implementation challenges of DHIS2 in Uganda with focus on health system challenges that enhance its performance noted that continued onsite support supervision, mentorship and additional health system or infrastructure enhancements that may include: internet connectivity, incentivisation, etc. are needed to overcome challenges of untimeliness, incompleteness and inaccuracy of data at health system level (Vincent Micheal Kiberu, 2014). A cross sectional study done at 16 primary health care facilities in Northern Nigeria with an objective to assess the data collection processes of CHWs under iCCM recommended development of national standardized reporting tools and systems, developing guidelines at each level of the process, routine trainings and supervisions for CHWs as key challenges that should be addressed by any country adopting and implementing iCCM programs (Nyangara et al., 2018).

Other health system factors that may be associated with the reporting process include: CHW selection criteria, holding routine data quality review meetings and sharing feedback with the community, encouraging use of collected data through meetings, linking CHW data with other DHIS2 databases, and engaging partners who emphasize and build on the existing reporting process (HISP at the University of Oslo, 2017).

2.3.5 Individual knowledge and perceptions

Perceptions and knowledge of individual VHT members, peer supervisors, health workers, and focal persons in the VHT/iCCM program can have an influence on the reporting process. This includes their attitudes, perceptions and knowledge on the requirements and guidelines of the reporting systems with regards to timeliness, completion and submission of reports. Past experiences of CHWs and how they view and appreciate the existing systems and mechanisms have also shown an influence on their overall performance and functionality(Druetz, Kadio, Haddad, Kouanda, & Ridde, 2015).

2.4 Conclusion

Many studies have been conducted on the general functionality of the VHT/iCCM strategy in Uganda but there still existed information gaps on factors associated with the reporting process. Majority of studies done, focused on how VHTs carry out day to day activities such as a community mobilization, household visits, etc. and paid little attention to the existence of hierarchical functional reporting systems, and no studies had been done to determine barriers and facilitators of the reporting system especially in Nakapiripirit that greatly benefits from this strategy. It is this knowledge gap that this study sought to bridge by assessing the submission, completeness and timeliness levels of VHT/iCCM reports in Nakapiripirit district: barriers, facilitators and associated factors.

CHAPTER THREE: MATERIALS AND METHODS

3.1 STUDY DESIGN

This was a cross-sectional study for all the objectives and was conducted in April 2018. We used both quantitative (secondary data from DHIS2 for objective one and primary data collection for objective two) and qualitative methods of data collection for objective three.

3.2 STUDY SITE/SETTING

The study was conducted at the health facilities of Nakapiripirit district. Nakapiripirit is located in North Eastern Uganda in the Southern part of Karamoja region, bordering Moroto in the north, Katakwi in the west with Sironko and Kapchorwa in the south. It has a population of about 153,862 people as estimated by the National census in 2014 speaking main languages of Ng'akarimojong and Kiswahili. The district has 8 sub counties, 36 parishes, 176 villages, 2 Health Sub Districts (HSDs), no district hospital, with 17 health facilities which are of levels II, III and IV and VHTs forming a virtual Health Centre level I. The district has a total of about 460 functional VHTs as of August 2017, with an average of about 30 VHTs per facility expected to submit VHT/iCCM reports through DHIS2. Nakapiripirit is majorly encompassed by three livelihood zones: these include pastoral (livestock), agricultural (mainly sorghum or maize) and agro pastoral zones(USAID, 2017).

3.3 QUANTITATIVE STUDY (objectives one and two)

3.3.1 POPULATION

3.3.1.1 Target population

All health facilities and VHTs in Nakapiripirit district.

3.3.1.2 Accessible population

All health facilities and VHTs in Nakapiripirit that were expected to submit VHT/iCCM reports through DHIS2 for the period of January to December 2017.

3.3.1.3 Study population

Health facilities in Nakapiripirit that were expected to submit VHT/iCCM reports through DHIS2 for the period of January to December 2017. All VHTs who fulfilled the eligibility criteria and consented to participate in the study.

3.3.2 ELIGIBILITY CRITERIA

3.3.2.1 INCLUSION CRITERIA

- Health facilities in Nakapiripirit that were expected to submit VHT/iCCM reports for the period of January to December 2017
- VHTs that served for the entire year of 2017 (the functionality of the VHTs was verified by cross checking lists of active VHT members for the year 2017 at the health facilities)
- VHTs that gave informed consent

3.3.2.2 EXCLUSION CRITERIA

- Facilities that may have terminated support supervision to the VHT/iCCM reporting process during the period of January to December 2017.

3.3.3 SAMPLE SIZE ESTIMATION

3.3.3.1 OBJECTIVE ONE

The unit of study was the health facility.

The sample size was estimated using a formula by S. Cummings (Cummings SR. et al, 2001) $N= (4Z_{\alpha 2}S_2) /W^2$

Where; S was the standard deviation of the variable

W was the total width of the interval

$Z\alpha$ was the standard normal deviate for α, when $\alpha= 0.05$, $Z\alpha=1.96$

For outcome variable submission levels (continuous)

From a pilot study conducted in Nakapiripirit in August 2017 supported by Doctors with Africa (CUAMM): a non-government organization supporting the VHT strategy in Nakapiripirit; using DHIS2 data for 2016, the mean quarterly submission level for the district was 78.94, with Standard Deviation (SD); 15.811 and 95% Confidence Interval (CI); 66.79 to 91.10

Therefore $N= (4x1.96^2x15.811^2)/24.31^2$; considering the design effect; (x2); this gave us a sample size of 14 health facilities.

For outcome variable completeness levels (continuous)

Mean quarterly completeness level for the district was 68.70, with Standard Deviation (SD); 10.31 and 95% Confidence Interval (CI); 60.25 to 75.14 (Pilot study)

Therefore $N= (4x1.96^2x10.31^2)/14.89^2$; considering the design effect; (x2); this gave us a sample size of 15 health facilities.

For outcome variable timeliness levels (continuous)

The mean quarterly timeliness level for the district was 9.61, with Standard Deviation (SD); 9.794 and 95% Confidence Interval (CI); 2.08 to 17.14 (Pilot study).

Therefore N= $(4x1.96^2x9.794^2)/15.06^2$; considering the design effect; (x2); this gave a sample size of 14 health facilities.

The study required a minimum number of 15 health facilities.

3.332 Objective two;

The unit of study was both the VHTs and health facilities. All the 15 health facilities were considered as fixed clusters, and then VHTs were conveniently sampled at each facility.

Calculating number of clusters (health facilities)

We used the formula by Bennet and Colleagues (Steve Bennet et al, 1991)

$C= P (1-P)* D/S^2b$

Where P was the prevalence or level of outcome, D= design effect (to adjust for loss of effectiveness due to clustering of participants at the facility level) = 2 (statistically recommended value when using cluster sampling methods), S was the standard error given by the alpha value corresponding to 95% confidence interval/ Z alpha= 0.05/1.96 = 0.0255, 95% level of confidence was chosen since it has a relatively low degree of uncertainity, b= was the number of participants per cluster

Determining number of participants per cluster (b);

We used; $C= P (1-P)* D/S^2b$; to find b

With a fixed number of clusters; C= 15

Considering submission levels at 78.94% (pilot study)

15= 0.7894(0.2106)* 2/0.0255^2*b which gave = 34 (participants per cluster)

Considering completeness levels at 68.70% (pilot study)

15= 0.6870(0.313)* 2/0.0255^2*b which gave = 44 (participants per cluster)

Considering timeliness levels at 9.61% (pilot study)

15= 0.0961(0.9039)* 2/0.0255^2*b which gave = 18 (participants per cluster)

The study required a minimum number of 44 VHT participants per facility.

Determining total number of participants

Statistical analysis method for the associated factors was multiple linear regression.

We used the formula by Green, S.B. (1991), this formula has two rules of thumb which include; use of R^2 (recommended=0.07) and a beta value (recommended=0.2) to test the overall fit for the regression model and a value of 104 as constant for the minimum acceptable sample size.

For a medium effect R^2= 0.07 for the combination of predictors and beta value=

0.2 N≥ 104 + k

Where k was the number of predictors/ independent

variables From the conceptual framework; k= 20

Considering dummy variables from categorized predictors (about 10 dummy variables); k=30

For R^2; N= 104 + 30 = 134

For Beta value: N≥ 50 + 8k= 210

The study required a minimum number of 210 VHT participants.

3.3.4 SAMPLING PROCEDURE

Objective one: the unit of study was the health facility, with a sampling frame of 17 facilities. All 17 facilities were considered for enrollment but 3 facilities were excluded due to their inconsistencies in partipation in the VHT/iCCM program during 2017.

Objective two: the unit of study was the health facilities and VHTs. 266 VHTs that were able to come to the health facilities during the study period were enrolled. 5 VHTs were excluded as they had missing information on key study variables.

3.3.5 MEASUREMENT OF STUDY VARIABLES

3.3.5.1 INDEPENDENT OR PREDICTOR VARIABLES

These included individual socio-demographic, socio-economic, community and health system factors.

- Socio-demographic factors included:

Age, gender, marital status, duration of service, education level, household position, basic training and refresher trainings.

- Socio- economic factors included:

Household income (considered as net income as reported by the participant and excluding household expenditure), household size, wealth index, occupation, accessibility to health facility and mode of transportation

Wealth index:

The Study adopted standard and valid UNICEF/UNWFP validated questions on socio economic status. These questions had previously been used, in an assessment of Food Security and Nutrition

in Karamoja region (School of Public Health Makerere University College of Health Sciences & WFP Analysis, 2016).

Wealth index was assessed by collecting information on ownership of household assets that included; bicycle, motor cycle, car, mobile phone and television set, livestock such as cows, goats, sheep, chicken and pigs, access to essential facilities that included; household source of water, electricity, latrine and household structure (wall and roof material). The household information collected was reduced using Principal Component Analysis (PCA) to constitute a single variable that was termed "wealth index" which was summarized into quintiles of: lowest(poorest), fourth, third, second and highest(richest).

- Community factors included: number of villages served by VHT, household coverage and the Livelihood zone. Livelihood zone was categorized into Central sorghum and livestock zone, Mountain slopes maize and cattle zone, Highlands agriculture zone, Low lands Cattle and maize livelihood zone, Mixed crop farming zone at data collection. This was subsequently categorised into two heterogeneous groups of the central sorghum livestock zone and other zones at analysis
- Health system factors included: type of facility, selection criteria, attaining basic and/or refresher training, reporting tools, supervisions, incentives, partners engaged, VHT meetings, provision of reporting guidelines accessibility to district office and mode of transportation.

3.3.5.2 DEPENDENT/OUTCOME VARIABLES

There were three outcome variables that comprised or constituted VHT/iCCM reporting levels. The three variables could not be combined since accuracy which is an important component of

data quality was not captured by this study due to the short time period and since it is best captured prospectively.

The variables were submission, completeness and timeliness levels.

How they were measured;

Submission levels: the total number of VHT/iCCM reports submitted to DHIS2 in relation to those expected from the health facilities per quarter and was expressed as a percentage score for each facility.

Completeness levels: the total number of filled data elements/cells of submitted reports in relation to the total number data elements/cells expected to be filled for a submitted report and was expressed as a percentage score for each facility.

Timeliness levels: total number of quarterly VHT/iCCM reports submitted by the health facility to the District Health Office before the deadline (on or before the seventh day of the reporting month which is the month that immediately follows the end of a quarter) in relation to the total number of expected reports and was expressed as a percentage score for each facility.

3.3.6 DATA COLLECTION PROCEDURE

VHT/iCCM data for Nakapiripirit for the year 2017 was exported from the DHIS2 system into excel sheets. Key data elements included: health facilities, Sub County, facility level, timeliness (percentage of reports submitted on time i.e. on or before the 7^{th} of every reporting month), completeness of submitted reports, submission levels (computed as a proportion of total number of observed reports to the total number of expected reports per quarter). The data was double checked with raw data at the district to correct for any errors or inconsistencies.

Pre-tested interviewer administered structured questionnaires were used to collect primary data on VHT participants and health facilities which were done by trained research assistants. The questionnaires were translated to Ng'akarimojong language and back to English. The information was recorded as reported by the VHTs and health facility focal persons.

3.3.7 DATA MANAGEMENT

Secondary data from DHIS2 was cleaned by the PI and exported in STATA 13 for analysis. The PI cross checked all collected primary data from questionnaires for completeness, correctness and consistency daily. The collected data was double entered and cleaned using Epi Data version 4.0 and exported into STATA 13 for analysis. All data was saved and backed up regularly and kept under lock and key.

3.3.8 DATA ANALYSIS

Data Reduction: Data on the 16 variables that constituted wealth index were reduced using Principal Component Analysis (PCA) data reduction technique in STATA 13. This was followed by summarizing wealth index into quintiles of: lowest (poorest), fourth, third, second and highest (richest).

3.3.8.1 UNIVARIATE ANALYSIS

All study variables were included and this was done to obtain a general description of the characteristics of the VHT participants and the health system. Categorical variables were summarized into frequencies and proportions. The continuous variables were summarized as means with its standard deviation. An overall descriptive summary of the three outcome variables was done and among different subgroups of health facilities.

3.3.8.2 BIVARIATE ANALYSIS

Each of the independent variables was analyzed independently with the three outcome variables using simple linear regression after checking for model assumptions. All the variables with P values less than 0.2 were considered for multivariate analysis. Predictor variables with P values greater than 0.2 were subsequently dropped.

3.3.8.3 MULTIVARIATE ANALYSIS

Standard multiple linear regression with the enter method was conducted to assess if the independent variables were associated with the VHT/iCCM reporting levels (submission, completeness and timeliness). The independent variables considered at this stage included age, livelihood zone, household coverage, facility level, VHT supervision ratio, occupation and marital status. The three outcome variables were each modeled independently with the combination of these independent variables. For each of the outcome variables, the models were adjusted for clustering to allow for differences in the variance or standard errors due to arbitrary intra-group correlation among health facilities. The models were tested for the assumptions of multiple linear regression. These included: linearity, independence of the outcome variables at different levels of the predictor variables, normal distribution, equal variances (homoscedasticity) and multicollinearity. Histograms, probability plots, Kernel density plots and Shapiro wilks test on residuals were used to check for normal distribution. Residuals vs. Fitted (RVF) plots and H test for heteroskedasticity were used to test for equal variances. Component Plus Residual (CPR) plots with a lowess smoother were used to test the assumptions of linearity and independence. VIF values of greater than 10 were used to determine if there was multicollinearity.

None of the assumptions for multiple linear regression was violated by the data. Variables with P values less than 0.05 that included; occupation, age, household coverage, livelihood zone and facility level were considered for testing for interaction using multiple linear regression with stepwise elimination methods. VHT supervision ratio, occupation and marital status were subsequently dropped as they had P values greater than 0.05. The change in the measures of association (beta value) between the predictors on each of the three outcome variables was checked at different levels of a covariate and a change above twenty percent was used to determine if there was interaction. Interaction was assessed on a multiplicative scale by generating interaction terms between the significant predictor variables. The change in the measures of association (beta value) between the predictors on each of the three outcome variables was checked in the presence of a covariate and a change above ten percent was used to determine if there was confounding. There was no significant interaction and confounding in all the models.

3.4 QUALITATIVE STUDY

The qualitative methods were employed concurrently with the quantitative approaches. There were independent factors influencing the reporting process that could not be explored quantitatively at the community and individual levels and did not necessarily depend on the quantitative methods. The aim was identify and explore additional potential barriers and facilitators of the VHT/iCCM reporting process at both individual and group levels that could not be explored through quantitative methods.

3.4.1 DATA COLLECTION

3.4.1.1 FOCUS GROUP DISCUSSIONS (FGDs)

FGDs were used to identify potential barriers and facilitators of the reporting process**.** FGDs are known to stimulate participants to reveal essential information about opinions, beliefs, perceptions

and attitudes in group dynamics that often bring out aspects of the topic or reveal information about the subject that may not have been anticipated by the researcher or emerged from individual interviews(Wigley, 2017). Two FGDs were conducted with VHT participants, scheduled at the health facility compound, early in the morning and moderated by two research assistants. For purposes of homogeneity, the two groups of the VHT partcipants were categorized on the basis of sex. One FGD was conducted with a heterogeneous group of peer supervisors who were conveniently selected from randomly selected health facilities.

The FGDs were conducted by skilled moderators and note takers with presence and observation of the Principal Investigator (PI). An FGD guide that was written out in both English and Ng'akarimojong languages was used effectively to guide the discussions and keep them on track with discussion of points relevant to the barriers and facilitators of the reporting process.

The FGD moderators were trained on how to use the guide and keep the discussions in line with the study objective. All the discussions were audiotaped with consent from the participants. A total of 3 FGDs were conducted with the VHTs and a point of data saturation was achieved as the same issues were raised by all the participants during the third FGD.

There was preliminary data review and analysis by the PI in conjunction with data collection after conversion of the transcripts into English.

Each of the FGD sessions lasted between 45 to 120 minutes and a minimum of 7 to 9 participants were allowed for each FGD session.

3.4.1.2 KEY INFORMANT INTERVIEWS (KIIs)

A total of 12 KIIs were used to identify potential barriers and facilitators of the reporting process as narrated by the views and perspectives of individual participants. KIIs are known to investigate the meaning of social phenomena of interest as experienced by the people themselves in their

own words at the comfort of their own setting(Bryman, (1988)). Participants included district Health Information Systems (HMIS) focal persons (3), parish (3) and health facility supervisors (3) who were conveniently selected within each Health Sub District.

The 12 KIIs were conducted by the PI (Principal Investigator) who took notes and audiotaped the discussions with consent from the participants. A KII guide that was written out in English was used effectively to guide the discussions and keep them on track with discussion of points relevant to the barriers and facilitators of the reporting process.

There was preliminary data review and analysis by the PI in conjunction with the data collection process. The KIIs were conducted at the District Health Ofice (DHO) and the health facilities. Each of the KII sessions lasted between 30 to 40 minutes and a minimum of two participants was allowed for each category of participants and a point of data saturation was reached.

3.4.3 ANALYSIS OF QUALITATIVE DATA

Audio taped data and field notes were reviewed and transcribed directly from Ng'akarimojong into English. The transcripts were imported into open code software version 4.02 which was used to organize and assign appropriate and meaningful codes to the data. The assigned codes were arranged into appropriate themes which were organized into sub themes of appropriate barriers and facilitators. Similar coding schemes and themes were used across all groups of FGDs and KIIs. Thematic analysis was used make comparisons, explain differences and provide descriptions and explanations of the views or perceptions held by the different categories of research participants in relation to the barriers and facilitators of each of the outcome variables. This was followed by interpretation of the data generated to analyze and draw meanings. Methods of triangulation of the findings from the qualitative analysis were used to explain, compare and contrast with the quantitative findings at the discussion level.

3.5 QUALITY CONTROL AND DATA STORAGE

Research assistants were recruited on the basis of minimum qualification of Uganda Advanced Certificate of Education or its equivalent. They were trained for three days on both quantitative and qualitative data collection approaches and procedures appropriately.

Secondary data from DHIS2 was checked for consistency using raw data from the Nakapiripirit district HMIS office both paper based and digital templates.

There was double entry of the structured questionnaires for the quantitative data which was backed and saved regularly.

Moderators of FGDs had daily meetings with the PI to ensure that they kept in line with the research objectives and to help identify emerging issues that can be explored further in the subsequent FGDs. Questions of the FGDs were translated into Ng'akarimojong and back to English and also checked for consistency in meaning. All the data entered both quantitative and qualitative was saved and backed up regularly in a password protected computer.

3.4 ETHICAL CONSIDERATIONS

Permission was sought from Makerere University Clinical Epidemiology Unit (CEU). Ethical approval was sought from the Makerere University School of Medicine Research and Ethics Committee (SOMREC) and the Uganda National Council of Science and Technology (UNCST). Permission to enter the community and conduct the study was sought from the District Health Office (DHO) of Nakapiripirit.

CHAPTER FOUR: RESULTS

4.1 STUDY PROFILE

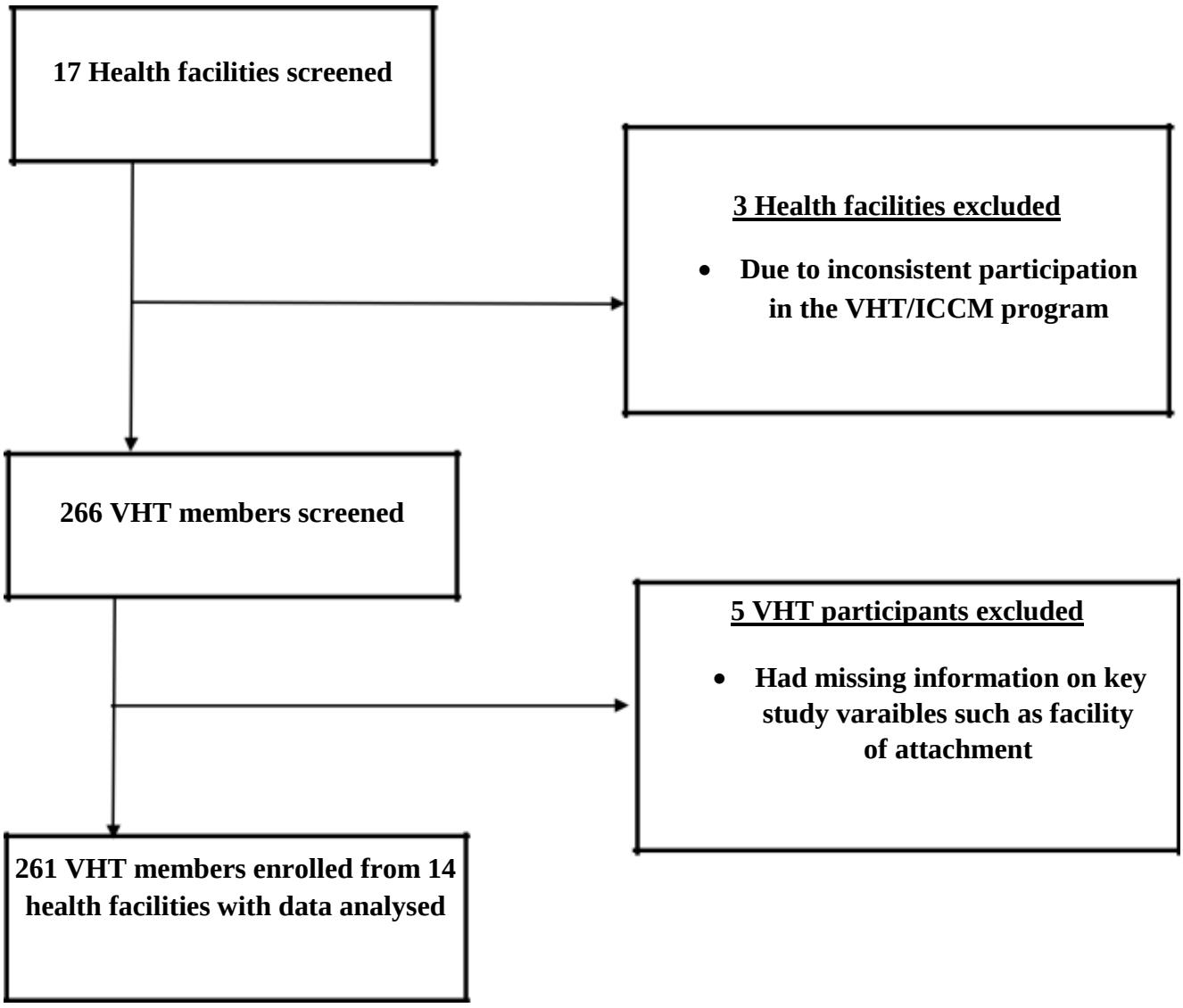

Figure 2 Study profile showing flow of VHT participants in Nakapiripirit district.

4.2 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS

Table 1. Socio-demographic characteristics of 261 VHT participants in Nakapiripirit district, 2017.

Variable		
Age (Years)	**Mean**	**SD**
	53.1	3.9
Sex	**Frequency (n)**	**Percentage (%)**
Female	125	47.9
Male	136	52.1
Marital Status		
Single	3	1.2
Married	250	95.8
Widowed	8	3.0
Education Level		
None	235	90.1
Primary	26	9.9
House Hold Position		
Not House Hold Head	82	31.4
House Hold Head	179	68.6

The mean age for the participants was 53.1 and majority were males (52.1 %). The majority were married (95.8%) and majority had not attained any formal education (90.1%) as shown in table 1 above.

4.3 SOCIO-ECONOMIC AND COMMUNITY CHARACTERISTICS OF THE PARTICIPANTS

Table 2. Socio-economic and community characteristics of 261 VHT participants in Nakapiripirit district, 2017.

Variable		
House Hold Income	**Median**	**Range**
	80,000	50,000-200,000
House Hold Size	**Mean**	**SD**
	6.0	1.3
VHT home distance to the Facility	**Mean**	**SD**
	2.5	0.9
Wealth Index	**Frequency (n)**	**Percentage (%)**
1st quintile (poorest)	91	34.9
2nd quintile	71	27.2
3rd quintile	35	13.4
4th quintile	28	10.7
5th quintile (richest)	36	13.8
Occupation	**Frequency (n)**	**Percentage (%)**
Farmer	240	91.9
Others	21	8.1
VHT House Hold Coverage	**Mean**	**SD**
	107.5	38.9
Livelihood Zone	**Frequency (n)**	**Percentage (%)**
Central Sorghum and Livestock Zone	151	57.9
Mountain Slopes maize and cattle Zone	15	5.8
Highlands agriculture zone	10	3.8
Lowlands Cattle and maize zone	10	3.8
Mixed crop farming zone	75	28.7

The median household monthly income for the participants was UGX 80,000. The mean household size was 6.0 and mean distance of a participant's home to the health facility they were attached to was 2.5 km. Majority of the VHTs reported farming as their major source of income (91.9%) and majority of the VHTs lived in households that were in the lowest quintile (34.9%), and a few of them were in the highest quintile (13.8%). Majority of the participants lived in the central sorghum and livestock zone (57.9%) as shown in table 2 above.

4.4 HEALTH SYSTEM CHARACTERISTICS OF THE PARTICIPANTS

Table 3. Health system characteristics of 261 VHT participants in Nakapiripirit district, 2017.

Variable		
Facility Level (n=14)	**Frequency (n)**	**Percentage (%)**
HC IV(n=2)	96	36.8
HC III(n=5)	115	44.1
HC II(n=7)	50	19.1
Facility distance to District Health Office (DHO)	**Mean**	**SD**
	37.9	22.6
VHT Supervision Ratio	**Mean**	**SD**
	16.9	3.8

Most of the participants in the study were attached to HC III's while a fewer number were attached to HC II's. The mean distance of the facilities in the study to the District health Office was 37.9 with a mean VHT Supervision ratio of 16.9 as shown in table 3 above. VHT Supervision ratio was obtained as a proportion of the average number of VHTs to the number of supervisors assigned per health facility. However there is no documentation for an optimal value for a VHT supervision ratio.

4.5 OVERALL REPORTING LEVELS

Table 4. Reporting levels (Submission, completeness and timeliness) of VHT/iCCM reports in Nakapiripirit district for the period of January to December 2017.

Variable	Mean (%)	95% CI
Submission (n=14)		
	89.5	88.1-91.6
Completeness (n=14)		
	78.2	76.0-80.4
Timeliness (n=14)		
	13.9	11.5-16.2

The mean report submission level overall for all the facilities was 89.5%, while mean completeness of submitted reports was 78.2% and mean timeliness of submitted reports was at 13.9% as shown in table 4 above.

4.5.1 REPORTING LEVELS AMONG SUBGROUPS OF HEALTH FACILITIES

Table 5. Mean reporting levels (Submission, completeness and timeliness) of VHT/iCCM reports in sub groups of health facilities in Nakapiripirit district for the period of January to December 2017.

Variable	Submission Mean(95%CI)	Completeness Mean (95%CI)	Timeliness Mean (95%CI)
Facility Level (n=14)			
HC IV (n=2)	100.0(-)	93.6(93.3-93.9)	7.5(4.3-10.8)
HC III (n=5)	91.3(89.1-93.5)	78.4(74.9-81.9)	28.3(24.6-31.9)
HC II (n=7)	82.8(79.5-86.1)	69.9(66.7-73.3)	0.0(-)

HC IVs had the highest level of submission at 100%, and completeness at 93.6%. HC IIIs had the highest level of timeliness at 78.4%, and HC IIs had the lowest levels of timeliness at 0.0% as shown in table 5 above.

4.6 FACTORS ASSOCIATED WITH REPORTING LEVELS

4.6.1 Bivariate Analysis

Simple linear regression was used for the bivariate analysis and only variables with P-values less than 0.2 at bivariate analysis were considered for the Multivariate analysis.

4.6.1.1 Bivariate analysis for factors associated with the submission levels (continuous) using simple linear regression.

Table 6. Association between socio-economic/demographic characteristics of VHT participants, community factors and health system factors with the submission levels (continuous).

Variable	Adjusted Beta Value	95%CI	P-Value
Age(Years)			
	-0.3	-0.8- 0.1	0.177
Sex			
Female	0.0		
Male	0.5	-2.8- 3.9	0.787
Marital Status			
Single	0.0		
Married	-1.9	-15.6- 11.6	0.776
Widowed	2.1	-13.4- 17.6	0.791
Education level			
None	0.0		
Primary	-0.5	-6.3- 5.3	0.873
House Hold Position			
Not House Hold Head	0.0		
House Hold Head	1.6	85.6- 91.8	0.385
House Hold Income			
	3.93e-06	-0.0000428- 0.0000506	0.869
House hold size			
	-0.5	-1.8- 0.8	0.425
Distance to facility			
	0.9	-0.8- 2.7	0.275
Wealth Index			
1st quintile(poorest)	0.0		
2nd quintile	-2.3	-6.8- 2.1	0.303
3rd quintile	-1.8	-6.67- 3.2	0.482

4th quintile	-6.0	-12.9- 0.9	0.086
5th quintile(richest)	-2.9	-8.2- 2.4	0.286
Occupation			
Farmer	0.0		
Others	1.9	-4.4- 8.3	0.539
House hold coverage			
	0.04	0.002- 0.07	0.038
Livelihood zone			
Central Sorghum and Livestock Zone	0.0		
Others	-11.9	-15.3- -8.5	<0.001
Facility level			
HC II	0.0		
HC III	8.5	4.5 - 12.5	<0.001
HC IV	17.2	13.9 - 20.5	<0.001
Facility Distance to DHO			
	0.05	-0.04- 0.14	0.298
VHT Supervision Ratio			
	0.6	-0.05- 1.33	0.068

The factors that were significantly associated with submission levels at 0.05 level of significance are; household coverage, livelihood zone and facility level as sown in table 6 above.

4.6.1.2 Bivariate analysis for factors associated with completeness levels (continuous) using simple linear regression.

Table 7. Association between socio-economic/demographic characteristics of VHTs, community factors and health system factors with the completeness levels (continuous).

Variable	Adjusted Beta Value	95%CI	P-Value
Age(Years)			
	-0.6	-1.10- 0.004	0.052
Sex			
Female	0.0		
Male	0.3	-4.1 - 4.7	0.887
Marital Status			
Single	0.0		
Married	6.3	-4.7 - 17.3	0.263
Widowed	7.0	-8.4- 22.4	0.371
Education level			
None	0.0		
Primary	-3.8	-11.7- 4.2	0.349
House Hold Position			
Not House Hold Head	0.0		
House Hold Head	0.9	-3.9 - 5.7	0.720
House Hold Income			
	-0.000015	-0.000067 - 0.000037	0.568
House hold size			
	-0.9	-2.6 - 0.72	0.262
Distance to facility			
	0.6	-1.7 - 2.9	0.590
Wealth Index			
1st quintile(poorest)	0.0		
2nd quintile	1.9	-3.4 - 7.2	0.477
3rd quintile	-4.3	-11.9 - 3.3	0.263
4th quintile	-5.8	-13.8 - 2.3	0.161
5th quintile(richest)	-5.7	-12.7 - 1.3	0.109
Occupation			
Farmer	0.0		
Others	-1.0	-8.9 - 6.9	0.802
House hold coverage			
	0.035	-0.011- 0.081	0.139
Livelihood zone			
Central Sorghum and Livestock Zone	0.0		
Others	-1.7	-6.6 - 3.2	0.489

Facility level			
HC II	0.0		
HC III	8.4	3.6 - 13.2	0.001
HC IV	23.6	20.3- 26.9	<0.001
Facility Distance to DHO			
	-0.003	-0.1 - 0.09	0.946
VHT Supervision Ratio			
	-0.9	-1.7 - -0.13	0.023

The factors that were significantly associated with completeness levels at 0.05 level of significance are; Age (borderline), facility level and VHT supervision Ratio as shown in table 7 above.

4.6.1.3 Bivariate analysis for factors associated with timeliness levels (continuous) using simple linear regression.

Table 8. Association between socio-economic/demographic characteristics of VHTs, community factors and health system factors with the timeliness levels.

Variable	Adjusted Beta Value	95%CI	P-Value
Age(Years)			
	-0.1	-0.7 - 0.5	0.737
Sex			
Female	0.0		
Male	0.2	-4.5- 4.9	0.943
Marital Status			
Single	0.0		
Married	-11.3	-13.7 - -8.9	<0.001
Widowed	-9.4	-21.6 - 2.8	0.131
Education level			
None	0.0		
Primary	-3.7	-10.3 - 2.9	0.274
House Hold Position			
Not House Hold Head	0.0		
House Hold Head	1.6	-3.5 - 6.7	0.544
House Hold Income			
	-0.0000216	-0.000074- 0.000031	0.414
House hold size			
	-0.6	-2.2 - 0.9	0.434
Distance to facility			
	-1.8	-3.9 - 0.3	0.099
Wealth Index			
1st quintile(poorest)	0.0		
2nd quintile	1.7	-4.8 - 8.12	0.610
3rd quintile	-3.1	-10.52 - 4.4	0.416
4th quintile	-11.5	-17.5- -5.40	0.000
5th quintile(richest)	-6.2	-12.9 - 0.52	0.071
Occupation			
Farmer	0.0		
Others	-9.9	-14.8 - -5.0	<0.001
House hold coverage			
	0.07	0.03 - 0.12	0.002
Livelihood zone			
Central Sorghum and Livestock Zone	0.0		
Others	15.3	10.4 - 20.11	<0.001
Facility level			
HC II	0.0		

HC III **HC IV**	28.3 7.5	24.6 - 31.9 4.3 - 10.7	<0.001 <0.001
Facility Distance to DHO			
	0.03	-0.05- 0.10	0.486
VHT Supervision Ratio			
	-0.20	-0.6 - 0.23	0.357

The factors that were significantly associated with timeliness levels at 0.05 level of significance are; marital status, occupation, household coverage, livelihood zone, facility level as shown in table 8 above.

4.6.2 Multivariate analysis

4.6.2.1 Multivariate analysis for factors associated with submission levels (continuous)

Multivariate linear regression was used for the multivariate analysis and only variables with P-values less than 0.2 at bivariate analysis were considered on each of the outcome variables.

Table 9. Association between the socio-economic/demographic characteristics of VHT participants, community factors, health system factors with the submission levels (continuous)

Variable	Beta Value	(95%CI)	P-Value
Facility Level			
HC II	0.0		
HC III	17.2	13.8 - 20.9	<0.001
HC IV	12.7	9.9 - 15.5	<0.001
Livelihood Zone			
Central Sorghum and Livestock Zone	0.0		
Others	-17.4	-20.6 - -14.2	<0.001
Age			
	-0.4	-0.7 - -0.1	0.023

There was a significant increase in submission levels (at 17.2% and 12.7% respectively) when comparing HC II's to HC III's and IVs. There was a significant decrease in submission levels when comparing participants in the central sorghum and livestock zone to those in other livelihood zones (B= -17.4). There was also significant decrease in submission levels with an increase in age of the participants (B= -0.4), ie a unit increase in age led to a significant reduction of 0.4 % in the submission levels as shown in table 9 above.

4.6.2.2 Multivariate analysis for factors associated with completeness levels (continuous)

Table 10. Association between the socio-economic/demographic characteristics of VHT participants, community factors and health system factors with the completeness levels (continuous)

Variable	Beta Value	(95%CI)	P-Value
Facility Level			
HC II	0.0		
HC III	8.9	4.1 - 13.8	<0.001
HC IV	23.7	20.3 - 27.1	<0.001
Age			
	-0.6	-1.07 - -0.1	0.017

There was a significant increase in completeness levels (at 8.9% and 23.7% respectively) when comparing HC II's to HC III's and IVs. There was a significant decrease in completeness levels with unit increase in age [B -0.6, CI (-1.07 - -1.08)], ie a unit increase in age led to a significant reduction of 0.6 % in the completeness levels There was no significant interaction between the variables and no significant confounders as shown in table 10 above.

4.6.2.3 Multivariate analysis for factors associated with timeliness levels (continuous)

Table 11. Association between the socio-economic/demographic characteristics of VHT participants, community factors and health system factors with the Timeliness levels (continuous)

Variable	Beta Value	(95%CI)	P-Value
Facility Level			
HC II	0.0		
HC III	28.3	24.6 – 31.9	<0.001
HC IV	7.5	4.3 - 10.7	<0.001

There was a significant increase in timeliness levels (at 28.3% and 7.5% respectively) when comparing HC II's to HC III's and IVs. There was no significant interaction between the variables and no significant confounders as shown in table 11 above.

4.7 RESULTS FROM THE QUALITATIVE METHODS

The key issues that emerged in relation to VHT/iCCM reporting levels in Nakapiripirit district were as described below.

4.7.1 Barriers and facilitators of submission levels

The major barrier and facilitator of submission of reports was failure of the health system to regularly conduct monthly VHT meetings. The VHT members obtain an allowance of 10,000 Ugandan shillings through the monthly meetings and have now resorted to holding on to the reports until the meetings are conducted. When the meetings eventually take place, reports are only submitted if the allowances are distributed to the VHT members.

"The VHTs will not produce those reports unless you hold the meetings, and even when the meeting is called, if you do not have the 10,000 shs allowance, like for some reasons like delay in requisitions and accounts problems, you will not get the reports". **A Key Informant from the health system in Nakapiripirit district 2018**

"We never have those monthly meetings on time, sometimes three months will end and there is no meeting and we are just told we have to wait for the money to get to the district". **A participant during FGD with VHTs in Nakapiripirit district 2018**

Another barrier to report submission was the limited involvement of the health facilities in conducting and participating in the VHT meetings. Health facilities have not been empowered by the health system to directly control or conduct the VHT monthly meetings. They are left to rely on the end results and decisions of the health system.

"As a facility we cannot do much, if the meetings are held, and the district has released funds for meetings, then we shall get the reports. But if the meetings don't take place, then we shall not get those reports, we have no way of pushing the VHTs to give those reports". **A Key Informant from a health facility in Nakapiripirit district 2018.**

A major facilitator and motivation to submission of reports was provision of allowances and incentivisation especially during the monthly VHT meetings.

"The 10,000 shs they give in the meetings is very important, it's like some kind of salary to the VHT, you know we are volunteers, so we have to make sure even the little money they plan to give to us, we can also get it, if we hold on to the reports, then they will have to hold the meetings and give the allowance for us to give the reports". **A Key Informant VHT supervisor in Nakapiripirit district 2018.**

"The 10,000 shs is very little money, we do a lot of work in the community by the way, and we understand we are not health workers to demand some payment, but maybe they can reconsider a little more money since they expect us to also do this reporting". **A participant during FGD with VHTs in Nakapiripirit district 2018**

4.7.2 Barriers and facilitators of completeness levels

High illiteracy levels was a major barrier to completeness of the reports especially with the VHT registers as the majority of the VHTs are known not to be able to read and write. The age of the VHTs was also considered synonymous with their illiteracy levels as the majority of the VHTs are above 50 years of old.

"Most of them did not go to school you know, so sometimes you will hear some complaints that they will ask other family members to write the information, especially if they have school going children, the children will do the work". **A Key Informant from a health facility in Nakapiripirit district 2018.**

"They are very old, most of them it's actually hard to engage them or give them instructions sometimes, because of the age gap we have with some of them, and those very old ones cannot read and write". **A Key Informant from a health facility in Nakapiripirit district 2018.**

"For most of them when you go to pick the information from the register, you find they have written nothing, then you have to start asking them what they did in the community and you help them fill in the information and which sometimes they may not remember". **A Key Informant VHT supervisor in Nakapiripirit district 2018**

Another barrier and facilitator to completeness was absence of refresher trainings that focused on VHT reporting functions. The majority of VHT trainings in the past 10 years focused on other components of VHT functionality such as drug distribution, community mobilization and nutrition among others.

"*So the problem is since the basic training we have not been able to do a training that focuses on the reporting, in most cases when some partners come to do some work, they will give trainings on what interests them like maybe the likes of nutrition, drug distribution, they never really focus on the reporting problem".* **A Key Informant from the health system in Nakapiripirit district 2018.**

"During basic training, we only had one day to understand how to use the register, and the register can be complex sometimes, sometimes it is difficult to fill in the information on drug balances". **A participant during FGD with VHTs in Nakapiripirit district 2018**

Selection of peer supervisors who are able to read and write and continuous close supervision of the VHTs was a facilitator of completeness of reports.

"*At least some of the supervisors can read and write, they help the members with filling the information, but for some even the supervisors are illiterate, so it becomes a challenge.* **A Key Informant from the health system in Nakapiripirit district 2018.**

4.7.3 Barriers and facilitators of timeliness levels

Irregular conduct of meetings by the health system was a key barrier to untimely submission of reports.

"The meetings these days do not happen every month, we can even go for 3 months without meetings, and the only way we make sure we get our allowance we keep the reports until they finally call for meetings". **A participant during FGD with VHTs in Nakapiripirit district 2018**

Seasonal changes were also a barrier to timely submission of reports in some areas in Nakapiripirit district. With eventual provision of allowances and conducting meetings, some VHT members and health facilities were still unable to submit their reports on time to the DHO especially during the rainy seasons when the roads were unpassable.

"It can be hard in the rainy season, sometimes the rivers block the roads, and we cannot move, even when the meetings have been called for, we are unable to move, so you cannot forward the reports to the district on time". **A Key Informant from a health facility in Nakapiripirit district 2018.**

"Each area faces different problems when it comes to seasonal changes especially during rainy season, like for us here being a sorghum and cultivation zone, people will start moving in to look for land to cultivate, and while other areas will face emigration as people will be moving here, and some of those VHTs will be moving too" **A Key Informant from a health facility in Nakapiripirit district 2018.**

"People move a lot during the rainy season, some of the VHT members will also move with the community to look for land to cultivate, when it's time to collect the reports, some of them will not be at their homes. **A Key Informant VHT supervisor Nakapiripirit district 2018.**

Motivation and incentivisation with items like umbrellas, gum boots, mobile phones etc. was a key facilitator in timely submission of reports.

"If they can give more support to us, things like umbrellas, gumboots, because we have move to get the reports, now in like this rainy season it difficult to go around. **A Key Informant VHT supervisor in Nakapiripirit district 2018.**

"Sometimes it can be hard when you want to go the health facility, but it is heavily raining, I do not have a phone to call the in charge at the facility, and you have no gum boots or umbrella, then you may not be able to attend the meeting or get there on time". **A participant during FGD with VHTs in Nakapiripirit district 2018**

CHAPTER FIVE: DISCUSSIONS

5.1 VHT/iCCM reporting levels (submission, completeness and timeliness) in Nakapiripirit district for the year 2017

5.1.1 Submission levels

The study revealed relatively high levels of report submission (89.5%) in Nakapiripirit district for the year 2017. This level of reporting is higher than the (60.0%) active report submission by CHWs in Kisumu, Kenya(Yoshito Kawakatsu, Tomohiko Sugishita, Jackson Kioko, Aya Ishimura, & Sumihisa Honda, 2012). This level of submission is slightly below the 95.4% submission levels reported by a study on data quality of CHIS in Embu, Kenya (Ndegwa, 2015). However the study in Embu focused on data quality assessment for one quarter of the year 2014 as opposed to this study that focused on quarterly reporting for the entire year of 2017. This level is also higher than 38.4% reporting rate reported by a general assessment of countrywide VHT/iCCM submitted reports for the first two quarters of 2017 (MOH, 2017). From the qualitative methods, it was found that report submission eventually occurs even after the mandated deadlines provided the VHT meetings are held and this can explain the relatively high submission levels.

5.1.2 Completeness levels

The study also revealed relatively high levels for completeness of reports (78.2%) in Nakapiripirit district. This level of completeness is below the 90.0% completeness levels reported by the study on one quarter data quality assessment of CHIS in Embu, Kenya (Ndegwa, 2015). This disagreement can be explained by the fact that CHWs in Embu reported directly to the health facilities and therefore had a shorter hierarchical reporting process compared to the VHTs in Nakapiripirit who report to the supervisors who in turn submit to the health facilities. From the qualitative methods, the relatively high levels of completeness in this study can be as a result of

well appreciated continuous peer supervision of the VHTs that ensures complete reports are submitted to the facilities.

5.1.3 Timeliness levels

The study furthermore revealed very low levels for timeliness at (13.9%) of VHT/iCCM reporting in Nakapiripirit district. The study in Embu, Kenya (Ndegwa, 2015) could not establish timeliness of submitted reports as this parameter was unknowingly not being recorded and checked by the responsible persons. In this study, the DHIS2 has a known provision for timeliness that must be checked and recorded for all submitted reports thus indicating the proportion of reports that were submitted before the deadlines. From the qualitative methods, the low levels for timeliness in this study can be explained by the persistent delay in conduct of meetings that have become an avenue for submission of VHT reports.

5.2 Factors associated with VHT/iCCM reporting in Nakapiripirit

5.2.1 Socio-demographic factors

Age

In this study, a unit increase in age showed a significant reduction in submission levels [B= -0.4, CI (-0.71 - -0.1), P=0.023]. Similarly, a unit increase in age showed a significant reduction in completeness levels [B= -0.6, CI (-1.07 - -0.1), P=0.017]. Older VHT members and their respective facilities of attachment are expected to have low levels of report submission and are more likely to submit reports with incomplete sections of the required data elements. A cross sectional study involving 750 CHWs to assess their reporting functions in Kisumu, Kenya (Y. Kawakatsu, T. Sugishita, J. Kioko, A. Ishimura, & S. Honda, 2012), revealed that older CHWs were likely to perform better than their counterparts with regards to reporting with an odds ratio of 3.54 (P<0.001). This disagreement with our study can be explained by the fact that the study in Kisumu had a mean age of 40 (SD= 10.9) while in this study the mean age was 53.11 (SD= 3.9) which limits similar variation and exploration of the effect of age on the reporting levels. These findings are also in agreement with results from the qualitative methods which raised age as a major barrier especially to the completeness of reports as it was perceived to have a relationship with the high illiteracy levels.

On the other hand, age did not show a significant effect on timeliness levels. This cannot be compared with the study in Embu since it was not able to explore timeliness but in our study it can

explained by the fact that timeliness of reporting has been attributed majorly on the failure of the health system to regularly conduct meeting regardless of most of the VHT member characteristics.

Education level

Education level did not show significant effects on submission, completeness and timeliness levels. This is in agreement with findings from the study in Kisumu (Y. Kawakatsu et al., 2012) that showed that education level was not significantly associated with CHW reporting functions (P=0.78). In this study there was an almost homogenous group of VHT participants with low levels of education as only 9.9% had received a primary education while the rest had no formal education. A previous study by (Brown, Malca, Zumaran, & Miranda, 2006) on the functionality of CHWs in rural Peru showed that CHWs with levels of education above primary were unstable, had opportunities for alternative employment and hence moved from one job to another and were more likely to have poor reporting functions. Education levels in this study did not a show similar effect on the reporting functions as that reported by (Brown et al., 2006) as none of the participants had attained any education above primary level. On the other hand, from the qualitative methods education level was considered a key barrier to the reporting levels especially completeness of reports as most of the VHTs were not able to read and write which is also reflected by the high levels of illiteracy in the study.

Sex

Sex of the VHT participant did not show significant effects on submission, completeness and timeliness levels. This is in agreement with findings from the study in Kisumu (Y. Kawakatsu et al., 2012) that showed that sex of the CHW was not significantly associated with CHW reporting functions (P= 0.88). Most countries have been reported to rely largely on female CHWs although

in most grass root or rural areas both men and women have been collectively employed and both groups were reported to show equal performance (Prasad & Muraleedharan, 2007). In this study, the majority of the VHTs were males (52.1%) and females were (47.9%) and this is in agreement with previous assessments that did not significantly consider gender as an important factor for CHW functionality at grass root levels or rural areas. From the qualitative methods, sex of the VHT member was not raised by any of the respondents as a barrier or facilitator of the reporting levels.

Marital status

Marital status of the VHT participant did not show significant effects on submission, completeness and timeliness levels. This is in agreement with findings from the study in Kisumu (Y. Kawakatsu et al., 2012) that showed that marital status of the CHW was not significantly associated with CHW reporting functions (P= 0.46). In this study majority of the VHTs were married (95.8 %) which was higher than (78.5%) reported by the study in Kisumu. In both studies marital status of the VHT member did not show any significant association with the reporting levels. From the qualitative methods, marital status of the VHT member was not raised by any of the respondents as a barrier or facilitator of the reporting levels.

House hold position

House hold position of the VHT participant did not show a significant effect on submission, completeness and timeliness levels. This is in agreement with findings from the study in Kisumu

(Y. Kawakatsu et al., 2012) that showed that house hold position of the CHW was not significantly associated with CHW reporting functions (P=0.4). In this study, the position of the VHT member in their household was not significantly associated with the reporting levels which was in agreement with the study done in Kisumu (P=0.49). From the qualitative methods, house hold position of the VHT member was not raised by any of the respondents as a barrier or facilitator of the reporting levels.

5.2.2 Socio-economic factors

Occupation

In this study, occupation of the VHT member other than performing VHT work was not significantly associated with the reporting levels. Majority of the VHTs were engaged in farming (91.9%) while very few (8.1%) were engaged in other small business ventures. This is in line with a previous assessment by (Brown et al., 2006) on CHws functionality that revealed that there was more display of full time committed volunteerism among CHWs in rural or grass root areas and therefore occupation was not significantly associated with their functionality. On the other hand, from the qualitative methods, involvement of some of the VHT members in farming especially during the rainy season was believed to affect the timeliness of the reporting.

House hold income and wealth

House hold income and wealth were not significantly associated with the reporting levels. This is line with a study by conducted in Kisumu (Yoshito Kwakatsu, 2012) which showed that household

income and wealth had borderline significance with the reporting functions (P= 0.05). However from the qualitative methods, ownership of certain assets such as; mobile phones, gum boots, bicycles and umbrellas was perceived by most of the participants as a key facilitator to timely reporting especially during the rainy season.

House hold size

In this study the average family size of the VHT members was (6.01) SD (1.3) and was not significantly associated with the reporting levels. This is in agreement with the study in Kisumu (Y. Kawakatsu et al., 2012) that reported a higher mean size of household (7.7) SD (4.5) but still showed that family size had no significant effect on CHWs reporting functions (P=0.43). From the qualitative methods, house hold size of the VHT member was not raised by any of the respondents as a barrier or facilitator of the reporting levels.

5.2.3 Community factors

House hold coverage

House hold coverage was not significantly associated with the reporting levels and the average the number of households covered by VHTs in this study was 107.5, SD (38.9). An assessment of CHW functionality in India (Prasad & Muraleedharan, 2007) showed that increased workload was associated with poor performance of CHWs, this disagreement with our study can be explained by the fact in India at that time CHW covered an average of over 1000 households. However the study in Kisumu (Y. Kawakatsu et al., 2012) is in agreement with our study as it did not show any association between household coverage and CHW reporting (P=0.74). From the qualitative

methods, house hold coverage or work load of the VHT member was not raised by any of the respondents as a barrier or facilitator of the reporting levels.

Livelihood zone

In our study, there was a reduction in submission levels when comparing VHT participants in the central sorghum and livestock livelihood zone with other livelihood zones (B= -17.4, CI (-20.6 - - 14.2), P<0.001). This is in line with a previous assessment done by the USAID 2017, (Mathys, 2017) in Karamoja region that showed increased settlements and activity in the central sorghum and livestock zones which accommodates the majority of the high level facilities and the DHO and therefore have an increase in number of higher wealth groups and are better organized and equipped to handle health system challenges.

However the effect of livelihood zone was not significant with completeness and timeliness levels. This can be explained by the fact that completeness is attributed peer to supervisions while timeliness is attributed to the conduct of meetings regardless of the livelihood zone of the participant. From the qualitative methods the livelihood zone of the VHT participant was conceived as an important factor on their functionality especially during seasonal changes like rainy seasons were a lot of migrations occur that sometimes may involve the VHT members.

5.2.3 Health system factors

Facility level

In the study, there was a significant increase in the reporting levels when comparing HC IIs with HC IIIs and HC IVs. There was significant increase in submission levels when comparing HC IIs with HC IIIs (B= 17.2, CI (13.8 - 20.9), P<0.001) and with HC IVs (B= 12.7, CI (9.9- 15.5), P<0.001). There was significant increase in completeness levels when comparing HC IIs with HC

IIIs (B= 8.9, CI (4.1 - 13.8), P<0.001) and with HC IVs (B= 23.7, CI (20.3 - 27.1), P<0.001). There was significant increase in timeliness levels when comparing HC IIs with HC IIIs (B= 28.3, CI (24.6 – 31.9), P<0.001) and with HC IVs (B=7.50, CI (4.3 - 10.7), P<0.001).

No previous studies or assessments have been done to study the association between the level of the health facility the VHT is attached and the reporting levels. In this study, poor reporting levels on all the parameters (submission, completeness and timeliness) are consistent with the lower level facilities with the HC IIs showing the poorest performance. HC IVs were more likely to have better reporting levels and this can also be supported by the fact that the high level facilities are located in the central sorghum and livestock zone which has higher wealth groups and also indirectly controls and supervises health system functions of the lower level facilities such as distribution of facility items such as drugs, sundries and some incentives. In addition to that VHT meetings are conducted at the higher level facilities where all the participants attached to lower level facilities in the same sub county are expected to converge. From the qualitative methods, the level of the health facility was not considered to have an effect on the reporting as many of the respondents believed that the health facilities were not empowered enough by the health system to control and contribute to VHT reporting activities.

VHT supervision

The study had a mean VHT supervision ratio of 16.9 (approximately 17) VHTs for each supervisor and this was not significantly associated with the reporting levels. The previous studies did not explore VHT supervision as a potential factor on the reporting function for example in Kisumu (Y. Kawakatsu et al., 2012) and Embu (Ndegwa, 2015), the CHW reportedly directly to their respective health facilities with no peer supervision. However in this study, supervision was considered key in VHT reporting since it was the first step in the hierarchical reporting process as

the VHTs directly submit their reports to the supervisors. The absence of significance at quantitative analysis can be explained by the fact the majority of the facilities had a high VHT supervision ratio median (15.7) range (10-28). None of the facilities had a ratio below 10 VHTs for each supervisor. From the qualitative methods, VHT supervision was considered a key facilitator to improved completeness of the VHT reports as some of the supervisors were reported to strictly follow and ensure that the members filled in their registers.

Distance of the facility to the DHO

The mean distance of the health facilities to the DHO was 37.9, SD= 22.6 and this was not significantly associated with the reporting levels. This can be explained by the fact that all facilities use a similar mode of transportation of reports to the DHO. Motor cycles have been provided by the health system to each health facility to assist in transportation of reports. From the qualitative methods, distance of the facility to the DHO was not raised by any of the respondents as a barrier or facilitator of the reporting levels.

Other health system factors

We proposed to explore other health system factors that included; Trainings for VHTs, incentivisation, partners, duration of service of the VHT member, number of villages served by the VHT member, selection criteria and presence of reporting guide lines at health facilities. However, these factors could not be explored since they were directly controlled by the DHO and hence did not vary at the health facilities or amongst VHT participants. Training functions were controlled by the health system and only initial basic trainings were conducted, no refresher trainings with regards to VHT reporting had been done. VHT selection was also directly controlled

by the health system and only one mode of selection was used across all facilities i.e. through community selection. No reporting guidelines were found at any of the facilities, all VHTs were allocated to strictly serve only one village and all the VHTs in the study were recruited at the same time (2011) during iCCM implementation and no new recruitments have been done since. From the qualitative methods, the role of the health system in the VHT/iCCM reporting process was considered to have a major effect on the reporting levels especially factors such as conduct of monthly meetings, incentivisation and trainings that were considered irregular by most of the participants.

5.2.5 Barriers and facilitators of reporting levels

Both the KIIs and FGDs revealed high illiteracy levels, irregular conduct of meetings, seasonal changes and migrations, inadequate trainings, poor incentivisation as key barriers to the reporting levels. While on the other hand, empowerment of health facilities to control VHT reporting functions (for example by assigning supervisors at facility level, incentivisation of VHT acitivities at facility level and control of VHT meetings and reporting functions by the facility as opposed to the district), peer supervision and allowances for the VHTs were found as key facilitators of the reporting levels. This is in agreement with a qualitative study by (Kimbugwe et al., 2014) that explored the challenges faced by VHTs in northern Uganda with 150 VHT participants. The study reported that motivation, community and stake holder appreciation, incentives such as transport refunds were key issues that had barred the VHT program from meeting most of its intended goals. These findings are also in line with a study by (Babughirana, 2017) that involved 526 VHTs in northern Uganda to assess their functionality. The study showed that 59% of the VHTs in northern Uganda considered incentivisation and monetary payments as key facilitators that motivated their performance in the program.

5.3 STRENGTHS OF THE STUDY

Triangulation of DHIS2 data with raw data from the DHO on the outcome variables helped to overcome challenges of inconsistency and missing data that are popular with DHIS2 system data.

Use of mixed methods and triangulating the findings from the quantitative methods with the findings from the qualitative methods at the discussion stage helped to give much better and alternative answers to the research questions.

5.4 STUDY LIMITATIONS

A potential limitation of our study was the sampling method. Convenience sampling was used and only VHT members who were able to come to the health facility during the conduct of the study were enrolled. This resulted in the enrollment of participants who lived 5 km away from the health facilities. Subsequently those who lived more than 5 km away were not enrolled and yet they were a group whose reporting levels should have been studied. In this study our participants did not represent the entire population of VHTs and this has an impact on the generalization of our study findings.

Data accuracy/quality of VHT/iCCM reports was not assessed as a subset of the reporting levels as information on this parameter is neither captured at the community or district levels.

5.4.2 TRUSTWORTHINESS OF FGDs AND KIIs

The research assistants were trained in methods of qualitative research and were recruited among community members with a minimum of Uganda Advanced Certificate of Education (UACE) and experience in qualitative methods of research. Research assistants were conversant with the language and setting to allow easy acceptability by the participants and confirmability of the results by avoiding potential biases or personal motivations by the researcher. The participants in FGDs

were encouraged to openly state their views on the topic, and to respect one another's opinions on the subject. Considering the difference in ranking levels between the VHTs, peer supervisors, the groups were separately engaged at different venues. Participants for both KIIs and FGDs were encouraged to state their ideas on the subject matter openly. Triangulation of results was done at the discussion level to ensure that the results from the qualitative methods were credible.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

This study showed relatively high levels for submission and completeness of VHT reports in Nakapiripirit district, however it revealed low levels for timeliness. The age of the VHT member, the level of the health facility and the livelihood zone of the community had significant effects on the reporting levels. However, irregular conduct of VHT meetings, inadequate trainings, seasonal changes with continuous migrations and illiteracy were major barriers of VHT/iCCM reporting. While incentivisation, supervisions and motivation were major facilitators of VHT/iCCM reporting.

6.2 RECOMMENDATIONS

1. With the pending upscale to the CHEWs, focus should be put on key factors such as the age of the member with priority given to lower age groups, incentivisation, prioritizing VHT meetings, reporting allowances and selection of individuals with higher levels of education. Lessons can be got from Malawi's Health Surveillance Assistants (HSA) program that has contributed to a significant drop in the country's child mortality rates.

   The program strictly enrolls individuals who have completed primary level education and are also paid small regular salaries that are strictly regulated and prioritised as opposed to the common enrollment of illiterate community members by CHW programs in most African countries with no proper salary or allowance structure. Proper non-financial incentive packages should be created in line with the common demands of the VHTs in Karamoja region with items such as gum boots, umbrellas, bicycles, mobile phones etc.

2. The MOH department of community health, DHO of Nakapiripirit district and stake holders in the VHT program such as UNICEF and Malaria Consortium should conduct re fresher trainings aimed at the reporting functions and requirements. This can be done through formation of VHT reporting clubs and meetings that are regulated and conducted atleast quarterly to provide a forum where VHTs, community members, health workers and supervisors who can also be part of the clubs, can work together to identify challenges and solutions to the reporting system. The formation of these clubs can be spearheaded by the DHO of Nakapiripirit district with support from the MOH department of community health.
3. The MOH department of community health, DHO of Nakapiripirit district and stake holders in the VHT program such as UNICEF and Malaria Consortium should increase peer supervision to the VHTs and selection of supervisors who are at least able to read and write. They also should prioritise allocation of more VHT supervisors to lower facility levels, and VHTs outside the central sorghum and livestock livelihood zone. A minimum of 10 VHTs for each supervisor can be considered appropriate as proposed for the upcoming CHEWs in order to address the high supervision ratio of 16.9 that was encountered in this population.

Future research

1. An evaluation of data quality and proof that submitted information in the reports reflects what is happening in the community (accuracy). Evaluation of VHT/iCCM data accuracy will further highlight or identify key challenges and/or strengths in the reporting process that will inform decision making, management and policy for the VHT/iCCM program in Karamoja region.

2. A step wise analysis of the hierarchical process (from the VHTs, to the supervisors, then to the facilities and lastly to the DHO) to determine which stem is rooted in the poor reporting levels. This will ensure that recommended behavioral change strategies or solutions to the poor reporting in the VHT/iCCM program in Karamoja region are targerted and applied to the right population.
3. Identification and review of key data elements and indicators that are associated with poor and/or high levels of completeness of VHT/iCCM reports. This will enable both basic and refresher trainings on VHT/iCCM reporting to focus on specific key data elements in the VHT/iCCM register that can be targeted to improve the levels of completeness.

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APPENDICES

Appendix 1 Informed Consent form for VHT participants

The consent form will be administered by an interviewer on the research team.

Study title
VHT/iCCM reporting: barriers, facilitators and associated factors in Nakapiripirit district.

Principal Investigator
Ms Elizabeth Babirye Katana, Makerere University College of health sciences, Clinical epidemiology unit, Mobile +256-792 88 5421, Email, lizkatna@gmail.com

Background and rationale of the study
You are requested to participate in a research study about VHT/iCCM reporting: barriers, facilitators and associated factors in Nakapiripirit district. Your participation in the study is voluntary. If you accept to participate, we shall use about 15 to 20 minutes of your time.

Purpose of the study
The study aims to determine the submission, completeness and timeliness levels of VHT reports in Nakapiripirit district: barriers, facilitators and associated factors.

Study Procedure
You will be asked some personal questions about yourself and some other questions that pertain to the VHT/iCCM reporting process.

Who will participate in the study?
The study will engage VHT members that were active in the VHT/iCCM reporting process for the year 2017, VHT supervisors at the parish (community), health facility and district levels.

Risk and Benefits
Taking your time could delay your other activities of the day. There are no direct benefits but the results of this study will provide information that will help in the structuring of CHW reporting systems in Nakapiripirit.

Cost and compensation
There will be no payment required for you to participate in this study. You will be given 10,000/= for your transport.

Confidentiality
If you accept to participate in this study, your record will be kept confidential. Your name will not appear on any study documents or publications. You will be known only by a study number. The School of Medicine Research Ethics Committee (SOMREC) and Uganda National Council for Science and Technology (UNCST) are entities which may have access to private information that identifies the research participants by name if required.

Alternatives to participation
Participation in research is completely voluntary. You may refuse to participate in this study or withdraw your consent at any time for any reason and this will not affect you in any way. You have the right not to answer questions you may not be comfortable answering.

In case of problems or questions
If you have any questions, complaints or concerns regarding this study, you can contact the Principle investigator: Ms Elizabeth Babirye Katana, Mobile Telephone 0792 88 5421: If you have any questions regarding the rights or any other ethical issues concerning your participation in this study, you may contact Professor Ponsiano Ocama, Chairman School of Medicine Research and Ethics Committee; Telephone +256 772 421 190

Dissemination of results:
All participants and stakeholders will get routine feedback on the findings and progress of the study and any new information that affects the study or data that has relevance to research participants (including incidental findings) will be made available to research participants and relevant stake holders.

Ethical approval:
This study has been approved by the Makerere University School of Medicine Research and Ethics Committee.

Participants' statement of consent
I have read and or someone has read and explained to me the information in this consent form. I understand why the research is being done, what will be done, the risk, benefits, and my rights regarding the study. I understand that by signing this form, I do not waive any of my legal rights nor relieve the investigator of any liability, but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate.

A copy of this consent form will be provided to me.

…… …… ……
Name of participant Signature or Thumb print Date

…….. …… ……..
Name of Witness Signature (if applicable) or Thumb print Date

…… …… …….
Name of study staff/interviewer Signature or Thumb print Date

Appendix 2: Consent for Focus Group Discussions

The consent form will be administered by an interviewer on the research team.

Study title

VHT/iCCM reporting; barriers, facilitators and associated factors in Nakapiripirit district.

Principal Investigator

Ms Elizabeth Babirye Katana, Makerere University College of health sciences, Clinical epidemiology unit, Mobile +256-792 8854 21, Email, lizkatna@gmail.com

Background and rationale of the study

You are requested to participate in a research study about VHT/iCCM reporting: barriers, facilitators and associated factors in Nakapiripirit district. Your participation in the study is voluntary. If you accept to participate, we shall use about 45 to 120 minutes of your time.

Purpose of the study

The study aims to determine the submission, completeness and timeliness levels of VHT/iCCM reports in Nakapiripirit district: barriers, facilitators and associated factors.

Study Procedure

You will take part in a focus group discussion. You will be in a group of 7 to 9 people interacting to give your views and opinions on the barriers and facilitators of the reporting process. In order not to miss out on the information during the discussion, the proceedings of the group discussion will be audiotaped and some brief notes well be taken.

Who will participate in the study?

The study will engage VHT members that were active in the VHT/iCCM reporting process for the year 2017, VHT supervisors at the parish (community), health facility and district levels.

Risk and Benefits

Taking your time could delay your other activities of the day. There are no direct benefits but the results of this study will provide information that will help in the structuring of CHW reporting systems in Nakapiripirit.

Cost and compensation

There will be no payment required for you to participate in this study. You will be given 10,000 Ugandan shillings only to cater for transport.

Confidentiality

If you accept to participate in this study, the record tapes, written notes and your written record will be kept confidential. The information gathered will only be used for the purpose of this study. Your name will not appear on any study documents or publications. You will be known only by a study number. The School of Medicine Research Ethics Committee (SOMREC) and Uganda

National Council for Science and Technology (UNCST) are entities which may have access to private information that identifies the research participants by name if required.

Alternatives to participation
Participation in research is completely voluntary. You may refuse to participate in this study or withdraw your consent at any time for any reason and this will not affect you in any way. Some of the questions may be embarrassing to you. You have the right not to answer questions you may not be comfortable answering.

In case of problems or questions
If you have any questions, complaints or concerns regarding this study, you can contact the Principle investigator, Ms Elizabeth Babirye Katana, Mobile Telephone 0792 88 54 21: If you have any questions regarding the rights or any other ethical issues concerning your participation in this study, you may contact Professor Ponsiano Ocama, Chairman School of Medicine Research and Ethics Committee; Telephone +256 772 421 190

Dissemination of results:
All participants and stakeholders will get routine feedback on the findings and progress of the study and any new information that affects the study or data that has relevance to research participants (including incidental findings) will be made available to research participants and relevant stake holders.

Ethical approval:
This study has been approved by the Makerere University School of Medicine Research and Ethics Committee.

Participants' statement of consent
I have read and or someone has read and explained to me the information in this consent form. I understand why the research is being done, what will be done, the risk, benefits, and my rights regarding the study. I understand that by signing this form, I do not waive any of my legal rights nor relieve the investigator of any liability, but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate.

A copy of this consent form will be provided to me.

…… …… ……
Name of participant Signature or Thumb print Date

…….. …… ……..
Name of Witness Signature (if applicable) or Thumb print Date

…… …… …….
Name of study staff/interviewer Signature or Thumb print Date

Appendix 3: Consent for Key Informant Interviews

The consent form will be administered by an interviewer on the research team.

Study title

VHT/iCCM reporting; barriers, facilitators and associated factors in Nakapiripirit district.

Principal Investigator

Ms Elizabeth Babirye Katana, Makerere University College of health sciences, Clinical epidemiology unit, Mobile +256-792 8854 21, Email, lizkatna@gmail.com

Background and rationale of the study

You are requested to participate in a research study about VHT/iCCM reporting: barriers, facilitators and associated factors in Nakapiripirit district. Your participation in the study is voluntary. If you accept to participate, we shall use about 30 to 40 minutes of your time.

Purpose of the study

The study aims to determine the submission, completeness and timeliness levels of VHT/iCCM reports in Nakapiripirit district: barriers, facilitators and associated factors.

Study Procedure

You will be asked some personal questions about yourself and some other questions that pertain to the VHT/iCCM reporting process.

Who will participate in the study?

The study will engage VHT members that were active in the VHT/iCCM reporting process for the year 2017, VHT supervisors at the parish (community), health facility and district levels.

Risk and Benefits

Taking your time could delay your other activities of the day. There are no direct benefits but the results of this study will provide information that will help in the structuring of CHW reporting systems in Nakapiripirit.

Cost and compensation

There will be no payment required for you to participate in this study. You will be given 10,000 Ugandan shillings only to cater for transport.

Confidentiality

If you accept to participate in this study, the record tapes, written notes and your written record will be kept confidential. The information gathered will only be used for the purpose of this study. Your name will not appear on any study documents or publications. You will be known only by a study number. The School of Medicine Research Ethics Committee (SOMREC) and Uganda National Council for Science and Technology (UNCST) are entities which may have access to private information that identifies the research participants by name if required.

Alternatives to participation
Participation in research is completely voluntary. You may refuse to participate in this study or withdraw your consent at any time for any reason and this will not affect you in any way. Some of the questions may be embarrassing to you. You have the right not to answer questions you may not be comfortable answering.

In case of problems or questions
If you have any questions, complaints or concerns regarding this study, you can contact the Principle investigator, Ms Elizabeth Babirye Katana, Mobile Telephone 0792 88 54 21: If you have any questions regarding the rights or any other ethical issues concerning your participation in this study, you may contact Professor Ponsiano Ocama, Chairman School of Medicine Research and Ethics Committee; Telephone +256 772 421 190

Dissemination of results:
All participants and stakeholders will get routine feedback on the findings and progress of the study and any new information that affects the study or data that has relevance to research participants (including incidental findings) will be made available to research participants and relevant stake holders.

Ethical approval:
This study has been approved by the Makerere University School of Medicine Research and Ethics Committee.

Participants' statement of consent
I have read and or someone has read and explained to me the information in this consent form. I understand why the research is being done, what will be done, the risk, benefits, and my rights regarding the study. I understand that by signing this form, I do not waive any of my legal rights nor relieve the investigator of any liability, but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate.

A copy of this consent form will be provided to me.

…… …… ……
Name of participant Signature or Thumb print Date

…….. …… ……..
Name of Witness Signature (if applicable) or Thumb print Date

…… …… …….
Name of study staff/interviewer Signature or Thumb print Date

Appendix 4: semi-structured questionnaire for VHT participants.

This will be administered by a research assistant.

Dear respondent, you have been selected to participate in this study, entitled **"**VHT/iCCM reporting: barriers, facilitators and associated factors in Nakapiripirit district". The principal investigator for this study is Ms Elizabeth Babirye Katana, from Clinical Epidemiology Unit, Makerere University School of medicine. You are requested to answer the questions as best as you can and your answers will be treated with utmost confidentiality.

1. Participant ID number …….. Date of Interview…….
2. Sub county…….
3. Parish…….
4. Village……
5. Health facility……
6. Start time…….. End time……

7. Participant Age in years ……..

8. Sex (tick one appropriate)

- ☐ Male
- ☐ Female

9. Education level (select appropriate)

- ☐ None
- ☐ Primary
- ☐ O level
- ☐ A level
- ☐ University
- ☐ Vocational
- ☐ Other (specify)…….

10. Marital Status (select appropriate)

- ☐ Single
- ☐ Married
- ☐ Widowed
- ☐ Divorced

☐ Other (specify) ……

11. Duration of service as VHT ……..

12. Occupation other than VHT ……..

13. Did you receive initial basic VHT training? (Select appropriate)

☐ Yes
☐ No
☐ Other…….

.

14. Did you receive any refresher VHT training since initial basic training? (Select appropriate)

☐ Yes
☐ No
☐ Other…….

15. If yes for question 13, how many trainings in 2017?

……..
……..

.

16. How many members are in your household?

…….

17. Are you the head of your household? (Select appropriate)

☐ Yes
☐ No
☐ Other…….

18. On average, how much income is attained in your household monthly?

…….

19. How many villages do you serve?

…….

20. How many households do you serve?

…….

21. What is the livelihood zone for your community? (Select appropriate)

☐ Central sorghum and livestock zone
☐ Mountain slopes maize and cattle zone
☐ Highlands agriculture zone
☐ Low lands Cattle and maize livelihood zone
☐ Mixed crop farming zone
☐ Mixed crop farming zone

☐ Other (specify) ……

23. How far is the health facility from your home?

……

24. By what means are the reports taken to the health facility?

☐ Motor cycle
☐ By foot
☐ By Vehicle
☐ Mobile phone
☐ Other…….

Wealth Index Questions (Household characteristics)

25. Do you have the following items in your home? (Tick appropriate)

☐ Motor cycle
☐ Bicycle
☐ Car
☐ Mobile phone
☐ Bed
☐ Table
☐ Radio
☐ Television Set
☐ Refrigerator
☐ Solar panel
☐ Electricity
☐ Latrine

26. What livestock do you keep in your home? (Tick appropriate)

☐ Cows
☐ Goats
☐ Sheep
☐ Chicken
☐ Pigs
☐ Others……..

27. What is the source of water in your home? (Tick appropriate)

☐ Piped water
☐ Bore Holes
☐ Stream/well
☐ River
☐ Sand dams
☐ Others……..

28. What is the roof material for your house? (Tick appropriate)

☐ Grass thatched/mud
☐ Iron sheets/Concrete
☐ Others……..

29. What is the wall material for your house? (Tick appropriate)

☐ Thatched/Straw
☐ Mud/poles
☐ Un burnt Bricks
☐ Burnt bricks with mud
☐ Cement block/burnt bricks with cement
☐ Others……..

Appendix 5: Health system questionnaire.

This will be administered by a research assistant and the participant will be the person in charge of VHT reporting at the health facility.

Dear respondent, this facility been selected to participate in this study, entitled **"**VHT/iCCM reporting: barriers, facilitators and associated factors in Nakapiripirit district". The principal investigator for this study is Ms Elizabeth Babirye Katana, from Clinical Epidemiology Unit, Makerere University School of medicine. You are requested to answer the questions as best as you can and your answers will be treated with utmost confidentiality.

1. Facility ID number …….. Date of Interview…….
2. Sub county…….
3. Parish…….
4. Facility level/type (tick one appropriate)

- ☐ HC I
- ☐ HC II
- ☐ HC III
- ☐ HC IV

5. VHT selection criteria (tick appropriate)

- ☐ Self-selected
- ☐ By community
- ☐ By peer VHT members
- ☐ By district
- ☐ By facility
- ☐ Other……

6. Average Number of functional VHTs attached to the facility for the year 2017……

7. Are the reporting guidelines in place at the health facility? ……

- ☐ Yes
- ☐ No
- ☐ Other……..

8. Is basic VHT initial training done? ……

- ☐ Yes
- ☐ No
- ☐ Other……..

9. Was any refresher VHT training been done in 2017? ……

- [ ] Yes
- [ ] No
- [ ] Other……..

10. If Yes for question 9, how often in 2017 (tick appropriate)

- [ ] Weekly
- [ ] Monthly
- [ ] Quarterly
- [ ] Annual
- [ ] Other…….

11. If Yes for question 10, what elements did the refresher training focus on? (Select appropriate)

- [ ] Reporting
- [ ] Community mobilization
- [ ] Basic health promotion
- [ ] Referral services
- [ ] ICCM
- [ ] Other……..

12. Were VHTs assigned supervisors? …… (Select appropriate)

- [ ] Yes
- [ ] No
- [ ] Other……

13. If yes for question 15, how many VHTs per supervisor? ……

14. Did the facility have reporting tools in 2017? (Select appropriate)

- [ ] Yes
- [ ] No
- [ ] Other……

15. If yes for question 14, which reporting tools were in existence at the facility? (Select appropriate)

- [ ] VHT registers
- [ ] VHT-Supervisor templates
- [ ] Supervisor-Facility templates
- [ ] Facility-District templates
- [ ] None
- [ ] Other……..

16. Were facility VHT meetings held in 2017? (Select appropriate)

- ☐ Yes
- ☐ No
- ☐ Sometimes
- ☐ Other…….

17. If yes for question 16, how often? (Select appropriate)

- ☐ Weekly
- ☐ Monthly
- ☐ Annual
- ☐ Quarterly
- ☐ Other…….

18. Were any partners supporting the strategy? (Select one appropriate)

- ☐ Yes
- ☐ No

19. If yes for question 21, List the partners

……..
……..

20. What incentives were given to VHTs in 2017

……..
……..

21. How far is the health facility from the district health office?

……

22. By what means are the reports taken to the district health office?

- ☐ Motor cycle
- ☐ By foot
- ☐ By Vehicle
- ☐ Mobile phone
- ☐ Other…….

Appendix 6: VHT FGDs topic guide.

Date ……..
Moderator ……Recorder ……..
Language used …….
Time: Start …….. End ……..

Good morning/afternoon
You are welcome to this discussion. My name is …… and my colleague (recorder) is ……
We are grateful you have accepted to be here today with us. We would like to have a discussion with you about the issue of VHT/iCCM reporting in Nakapiripirit. The purpose of this discussion is to assess the barriers and facilitators of the VHT/iCCM reporting process in Nakapiripirit that are key to you as VHTs. Everyone has their own opinion that may differ from the rest and we shall respect that. Feel free and give us your opinions. All information in this discussion will be kept confidential. We are tape recording and taking notes to be able to keep track of all that is being discussed, is that okay with you? (**Moderator ask for verbal and written consent**) Thank you very much.
In order for us to discuss freely we could first get to know each other, one name only.

1. How are you supposed to report, can you describe the reporting process?
2. What is your opinion on the process, do you think it is effective?
3. In your opinion, how do you think the reporting process should be done?
4. As VHTs, what makes you submit reports?
5. As VHTs what makes you submit reports on time?
6. What makes you submit reports with complete sections?
7. What do you think enables the entire reporting process?
8. What do you think hinders to the reporting process?
9. Does the environment or whether changes in Nakapiripirit have an effect on the reporting process? Discuss more.
10. How does the way of life in relation to pastoralism affect the reporting process?
11. What other factors in the reporting process do you think are affecting VHT reporting in Nakapiripirit?
12. What suggestions do you have to improve the reporting process?

Appendix 7: Peer supervisors FGDs topic guide.

Date ……..
Moderator ……Recorder ……..
Language used …….
Time: Start …….. End ……..

Good morning/afternoon
You are welcome to this discussion. My name is …… and my colleague (recorder) is ……
We are grateful you have accepted to be here today with us. We would like to have a discussion with you about the issue of VHT/iCCM reporting in Nakapiripirit. The purpose of this discussion is to assess the barriers and facilitators of the VHT/iCCM reporting process in Nakapiripirit that are key to you as VHT supervisors. Everyone has their own opinion that may differ from the rest and we shall respect that. Feel free and give us your opinions. All information in this discussion will be kept confidential. We are tape recording and taking notes to be able to keep track of all that is being discussed, is that okay with you? (**Moderator ask for verbal and written consent**)
Thank you very much.
In order for us to discuss freely we could first get to know each other, one name only.

1. How are VHTs supposed to report, can you describe the reporting process?
2. What is your opinion on the process, do you think it is effective?
3. In your opinion, how do you think the reporting process should be done?
4. As supervisors, what makes you ensure that VHTs submit reports?
5. As supervisors what makes you ensure that reports are submitted on time?
6. As supervisors, how do you ensure that VHTs submit reports with complete sections?
7. What do you think enables the entire reporting process?
8. What do you think hinders to the reporting process?
9. Does the environment or whether changes in Nakapiripirit have an effect on the reporting process? Discuss more.
10. How does the way of life in relation to pastoralism affect the reporting process?
11. What other factors in the reporting process do you think are affecting VHT reporting in Nakapiripirit?
12. What suggestions do you have to improve the reporting process?

Appendix 8: Peer supervisors KIIs topic guide.

Date ……..
Interviewer ……Recorder ……..
Language used …….
Time: Start …….. End ……..

Good morning/afternoon
You are welcome to this discussion. My name is …… and my colleague (recorder) is ……
We are grateful you have accepted to be here today with us. We would like to have a discussion with you about the issue of VHT/iCCM reporting in Nakapiripirit. The purpose of this discussion is to assess the barriers and facilitators of the VHT/iCCM reporting process in Nakapiripirit as experienced by a VHT supervisor. Feel free and give us your opinions. All information in this discussion will be kept confidential. We are tape recording and taking notes to be able to keep track of all that is being discussed, is that okay with you? (**Interviewer asks for written consent**) Thank you very much.
In order for us to discuss freely we could first get to know each other, one name only.

1. How are VHTs supposed to report, can you describe the reporting process?
2. What is your opinion on the process, do you think it is effective?
3. In your opinion, how do you think the reporting process should be done?
4. As a supervisor, what makes you ensure that VHTs submit reports?
5. As a supervisor what makes you ensure that reports are submitted on time?
6. As a supervisor, how do you ensure that VHTs submit reports with complete sections?
7. What do you think enables the entire reporting process?
8. What do you think hinders to the reporting process?
9. Does the environment or whether changes in Nakapiripirit have an effect on the reporting process?
10. How does the way of life in relation to pastoralism affect the reporting process?
11. What other factors in the reporting process do you think are affecting VHT reporting in Nakapiripirit?
12. What suggestions do you have to improve the reporting process?

Appendix 9: Facility supervisors KIIs topic guide.

Date ……..
Interviewer ……Recorder ……..
Language used …….
Time: Start …….. End ……..

Good morning/afternoon
You are welcome to this discussion. My name is …… and my colleague (recorder) is ……
We are grateful you have accepted to be here today with us. We would like to have a discussion with you about the issue of VHT/iCCM reporting in Nakapiripirit. The purpose of this discussion is to assess the barriers and facilitators of the VHT/iCCM reporting process in Nakapiripirit as experienced by a VHT facility supervisor. Feel free and give us your opinions. All information in this discussion will be kept confidential. We are tape recording and taking notes to be able to keep track of all that is being discussed, is that okay with you? (**Interviewer asks for verbal and written consent**) Thank you very much.
In order for us to discuss freely we could first get to know each other, one name only.

1. How are VHTs supposed to report, can you describe the reporting process?
2. What is your opinion on the process, do you think it is effective?
3. In your opinion, how do you think the reporting process should be done?
4. As a supervisor, what makes you ensure that VHTs submit reports?
5. As a supervisor, what makes you ensure that reports are submitted on time?
6. As a supervisor, how do you ensure that VHTs submit reports with complete sections?
7. What do you think enables the entire reporting process?
8. What do you think hinders to the reporting process?
9. Does the environment or whether changes in Nakapiripirit have an effect on the reporting process?
10. How does the way of life in relation to pastoralism affect the reporting process?
11. What other factors in the reporting process do you think are affecting VHT reporting in Nakapiripirit?
12. What suggestions do you have to improve the reporting process?

Appendix 10: District focal persons KIIs topic guide.

Date ……..
Interviewer ……Recorder ……..
Language used …….
Time: Start …….. End ……..

Good morning/afternoon
You are welcome to this discussion. My name is …… and my colleague (recorder) is ……
We are grateful you have accepted to be here today with us. We would like to have a discussion with you about the issue of VHT/iCCM reporting in Nakapiripirit. The purpose of this discussion is to assess the barriers and facilitators of the VHT/iCCM reporting process in Nakapiripirit as experienced by a district focal person. Feel free and give us your opinions. All information in this discussion will be kept confidential. We are tape recording and taking notes to be able to keep track of all that is being discussed, is that okay with you? (**Interviewer asks for verbal and written consent**) Thank you very much.
In order for us to discuss freely we could first get to know each other, one name only.

1. How are VHTs supposed to report, can you describe the reporting process?
2. What is your opinion on the process, do you think it is effective?
3. In your opinion, how do you think the reporting process should be done?
4. As a focal person, what makes you ensure that VHTs submit reports?
5. As a focal person, what makes you ensure that reports are submitted on time?
6. As a focal person, how do you ensure that VHTs submit reports with complete sections?
7. What do you think enables the entire reporting process?
8. What do you think hinders to the reporting process?
9. Does the environment or whether changes in Nakapiripirit have an effect on the reporting process?
10. How does the way of life in relation to pastoralism affect the reporting process?
11. What other factors in the reporting process do you think are affecting VHT reporting in Nakapiripirit?
12. What suggestions do you have to improve the reporting process?

Appendix 11: Translated tools.

TRANSLATED INFORMED CONSENT FORM FOR VHT PARTICIPANTS

Erae ekengitingitan alotooma atukot ngina aripiripan inges ekorakini abaruwa naga.

Study title

Epite ngolo emaikina ngidakitarin ngulu angirerya kikobiata ngiripotyo, nguna etyoko nguluisingarakinito kanguna erukito ka ngun daadang anakapiripirit.

Principal Investigator

Ms Elizabeth Babirye Katana, ngina ebunit alomakerer alosukul angolo ka angaleu, ka neni esyomere nguna eyaununuyete ngidekesyo, enamba +256-792 88 5421, kori ipedori akigirar ane, lizkatna@gmail.com

Akitaanyikinet.

Ikingitakinitae iyong ayakaun tooma nakisyom kori lokiyan lo neni nai iyanere iwon epite ngolo ebitor kori emaikina ngidakitarin ngulu angirerya kikobyata ngiripotio ngulu ke-etic, nguna isipiyorito ikes akitiyakin ngun (akikobanar ngiripotyo), nguna ithingarakinito ikes anakikobanar ngiripotio ka ngunacedang nguna apolok alotooma etic ngol anakapiripirit. Erae nai akoniyakau nakiyan na acamunet ka ainakina ngina ke-etau kon. Ani nai kicamu iyong ayakaun nakiyan na, ikiyai nai apaki adiocici ngina edoli ngadakikae nagatomon ka ngakan (15mins) akitodol natomoniyarei (20mins).

elosikinitoe nooi alokiyani alo kori anakisyom ana.

Nguna elosikinitoe nooi,erai aripun kikobanarete ngidakitarin ngulu angirerya (VHT) ngiripotio ngulu ke-etic kec itemokino ka toyakas napaki ngina iyookino tomam akingel, epite ngolo eyakatar ngiripotio, nguna ipiyoro aloripotio ka nguna apolok etapito ngiripotio pei alotooma Nakapiripirit.

Epite ngolo eripiripiyere kori iyanere.

Ikingisyo iyong ngadi nguna ikitapito iyong ka nabo ngacenguna etapito epite ngolo ikobanariata ngidakitarin ngulu angirerya (VHT) ngiripotio nguku ke-etic kec.

Nguna ejokak ka nguna edikino erokiata anakiyan ana.

Ayakau kon nege epedori aceepak akisicaluwar iyong etic kon ece ngolo anakuwar ana. Emam ibore ngini ajokan nooi iryamuni iyong nai nguna eripunio iwon anakiyan yok ikes ikingarakinete iwon asubakin ejok epite ngolo ebeit ngidakitarin ngulu angirerya kikobanariata ngiripotio ane anakapiripirit.

Etacit kon.

Emam etacit ngolo iryamuni iyong alotooma akiyan naga. Nai ilosi iyong aryamun ngisilinga ngalipyo ngatomon (10,000/=) ngulu ke-erot.

Nguna ka akerit nguna iyanio daadang.
Ani erai kicamu iyong ayakaun nakiyan na, nguna daadang ibongokini iyong iwayio kaakereru. Mam ngadi dang nguna elimorio kinga. Emam nyelimorio tar ekiro kon iwadio. Erai enamba bon ikiyenere iyong.

Kicamit ayakau nakiyan kori pa kicamit.
Erai ayakau kon nakiyan ngin acamunet ngina ke-etau kon. Iyakar iyong apedor kon ayakaun nakiyan na kori ipedori akinger dang erai keya ngakiro nguna iyeni iyong ka emam ibore ngini aronon itiyakin neni kon. Iyakar nabo iyong apedor akinger abongonokin ngakingiseta nguna iki karunito kori nguna nyicamit iyong.

Keya nguna etyoko kori icamit akingit.
Ani keya nguna etyoko kori icamitiyong kisileereunoi alotooma akiyan kori aripirip naga, ipedori iyong adolokin ngina epolokinit aripirip naga, Ms Elizabeth Babirye Katana, enamba keng; 0792-885-421. Anikeya nguna etapito ngapedorosyo kon alotooma akiyan naga ipedori iyong adolokin emalimu (prof.) Ponsiano Ocama ngolo epolokinit aryonget ngina ka aripirip ka nguna ke-ekitiyae ejok alo namba +256 772 421 190.

Acamunet ngina ke-ekabongonokinon.
Adau ayong akisyom kori akasyomakin ayong ka eketacaikin ayong daadang nguna eyakasi nabaruwa na. ayeni kona ayong nguna itiyaere aripirip naga nguna elosio akitiya nguna etyoko, nguna ejokak ka ngapedorosyo kang alotooma akiyan na. alo tooma akiciemakin abaruwa naga, emam nyabala ayong oyiu ekengitingitan angyokisyo nai akalimokinitae ayong aripirip na angina erai ayong elope ainakina.

Ebeit nai abaruwa na kigurunoi okoinakin ayong dang apei oting.
…… …… …… ……
Ekiro ngolo ke-ekabongonokinon. Ethei keng ka ngarwa nguna ke-elap.
…….. …… …….
Ekiro ngolo ke-esuuda, ethei keng ka ngarwa nguna ke-elap.
…… …… ……
Ekiro ngolo ke-ekengitingitan ethei keng ka ngarwa ngunake-elap.

TRANSLATED CONSENT FOR FOCUS GROUP DISCUSSIONS

Nguna ebongonokinio angigurupo kori angatuketa.

Erae ekengitingitan alotooma atukot ngina aripiripan ingses ekorakini abaruwa naga. .

Study title
Epite ngolo emaikina ngidakitarin ngulu angirerya kikobiata ngiripotyo, nguna etyoko,ngulu isingarakinito kanguna erukito ka ngun daadang anakapiripirit

Principal Investigator
Ms Elizabeth Babirye Katana, ngina ebunit alomakerer alosukul angolo ka angaleu, ka neni esyomere nguna eyaununuyete ngidekesyo, enamba +256-792 88 5421, kori ipedori akigirar ane, lizkatna@gmail.com

Akitaanyikinet.
Ikingitakinitae iyong ayakaun tooma nakisyom kori lokiyan lo neni nai iyanere iwon epite ngolo ebeitor kori emaikina ngidakitarin ngulu angirerya kikobyata ngiripotio ngulu ke-etic, nguna isipiyorito ikes akitiyakin ngun (akikobanar ngiripotyo), nguna ithingarakinito ikes anakikobabar ngiripotio ka ngunacedang nguna apolok alotooma etic ngol anakapiripirit. Erae nai akoniyakau nakiyan na acamune ka ainakina ngina ke-etau kon. Ani nai kicamu iyong ayakaun nakiyan na, ikiyai nai apaki adiocici ngina edoli ngadakikae nagatomoniomwon ka ngakan (45mins) akitodol amiyat ka ngatomoniyarei (120mins).

Nguna elosikinitoe nooi alokiyani alo kori anakisyom ana.
Nguna elosikinitoe nooi,erai aripun kikobanarete ngidakitarin ngulu angirerya (VHT) ngiripotio ngulu ke-etic kec itemokino ka toyakas napaki ngina iyookino tomam akingel, epite ngolo eyakatar ngiripotio, nguna ipiyoro aloripotio ka nguna apolok nguna etapito ngirirpotio pei alotooma Nakapiripirit.

Epite ngolo eripiripiyere kori iyanere.
Iyakaun iyog logurup kori ityao nu angigurupo. Iyakaun iyong logurup ngolo angitunga angikanikaarei kori ngikanikaomwon ngulu elosete akimor ka alimun nguna kec nguna etapito ngatyokisyo, ka nguna itapatanito epite ngolo ikobarere ngiripotio. Kotere nyimuriakin ngadi, elosio nai iwon akikamakin nguna iyanio daadang naredio ka igirio ngace dang lokitaabo.

Nguna ejokak ka nguna edikino erokiataankiyan ana.
Ayakau kon nege epedori aceepak akisicaluwar iyong etic kon ece ngolo anakuwar ana. Emam ibore ngini ajokan nooi iryamuni iyong nai nguna eripunio iwon ankiyan yok ikes ikingarakinete iwon asubakin ejok epite ngolo ebeit ngidakitarin ngulu angirerya kikobanariatangiripotio ane anakapiripirit.

Etacit kon.
Emam etacit ngolo iryamuniiyong alotooma akiyan naga. Nai ilosi iyong aryamun ngisilinga ngalipyo ngatomon (10,000/=) ngulu ke-erot.

Nguna ka akerit nguna iyanio daadang.
Ani erai kicamu iyong ayakaun nakiyan na, nguna daadang ibongokini iyong iwayio kaakereru. Mam ngadi dang nguna elimorio kinga. Emam nyelimorio tar ekiro kon iwadio. Erai enamba bon ikiyenere iyong.

Kicamit ayakau nakiyan kori pa kicamit.
Erai yakau kon nakiyan ngin acamunet ngina ke-etau kon. Iyakar iyong apedorkon ayakaun nakiyan na kori ipedori akinger dang erai keya ngakiro nguna iyeni iyong ka emam ibore ngini aronon itiyakin neni kon. Iyakar nabo iyong apedor akinger abongonokin ngakingiseta nguna ikikarunito kori nguna nyicamit iyong.

Keya nguna etyoko kori icamit akingit.
Ani keya nguna etyoko kori icamit iyong kisileereunoi alotooma akiyan kori aripirip naga, ipedori iyong adolokin ngina epolokinit aripirip naga, Ms Elizabeth Babirye Katana, enamba keng; 0792-885-421. Anikeya nguna etapito ngapedorosyo kon alotooma akiyan naga ipedori iyong adolokin emalimu (prof.) Ponsiano Ocama ngolo epolokinit aryonget ngina ka aripirip ka nguna ke-ekitiyae ejok alo namba +256 772 421 190.

Acamunet ngina ke-ekabongonokinon.
Adau ayong akisyom kori akasyomakin ayong kaeketacaikin ayong daadang nguna eyakasi nabaruwa na. ayeni konaayong nguna itiyaere aripirip naga nguna elosio akitiya nguna etyoko, nguna ejokak ka ngapedorosyo kang alotooma akiyan na. alotooma akiciemakin abaruwa naga, emam nyabala ayong oyiu ekengitinitan antyokisyo nai akalimokinitae ayong aripirip n angina erai ayong elope ainakina.

Ebeit nai abaruwa na kigurunoi okoinakin ayong dang apei oting.
…… …… …… ……
Ekiro ngolo ke-ekabongonokinon. Ethei keng ka ngarwa nguna ke-elap.
…….. …… …….
Ekiro ngolo ke-esuuda, ethei keng ka ngarwa nguna ke-elap.
…… …… ……
Ekiro ngolo ke-ekengitingitan ethei keng ka ngarwa ngunake-elap.

TRANSLATED CONSENT FOR KEY INFORMANT INTERVIEWS

Acamunet ngina a ngikabongonokinok angulu ebeit toyakaska torai ngakonyen.

Erae ekengitingitan alotooma atukot ngina aripiripan ingses ekorakini abaruwa naga. .

Study title
Epite ngoloemaikina ngidakitarin ngulu angrerya kikobiata ngiripotyo nguna etyoko nguluisingarakinito kanguna erukito ka ngun daadang anakapiripirit.

Principle investigator

Ms Elizabeth Babirye Katana, ngina ebunit alomakerer alosukul angolo ka angaleu, ka neni esyomere nguna eyaununuyete ngidekesyo, enamba +256-792 88 5421, kori ipedori akigirar ane, lizkatna@gmail.com

Akitaanyikinet.
Ikingitakinitae iyong ayakaun tooma nakisyon kori lokiyan lo neni nai iyanere iwon epite ngolo ebitorkori emaikina ngidakitarin ngulu angirerya kikobyata ngiripotio ngulu ke-etic,nguna isipiyorito ikes akitiyakin ngun (akikobanar ngiripotyo), nguna ithingarakinito ikes anakikobabar ngiripotio ka ngunacedang nguna apolok alotooma etic ngol anakapiripirit. Erae nai akoniyakau nakiyan na acamune ka ainakina ngina ke-etau kon. Ani nai kicamu iyong ayakaun nakiyan na, ikiyai nai apaki adiocici ngina edoli ngadakikae nagatomoniunin (30mins) akititodol ngatomoniomwon(40mins).

Nguna elosikinitoe nooi alokiyani alo kori anakisyom ana.
Nguna elosikinitoe nooi,erai aripun kikobanarete ngidakitarin ngulu angirerya (VHT) ngiripotio ngulu ke-etic kec itemokino ka toyakas napaki ngina iyookino tomam akingel, epite ngolo eyakatar ngiripotio nguna ipiyoro aloripotio ka nguna apolok etapito ngirirpotio pei alotooma Nakapiripirit.

Epite ngolo eripiripiyere kori iyanere.
Ikingisyo iyong ngadi nguna ikitapito iyong ka nabo ngacenguna etapito epite ngolo ikobanariata ngidakitarin ngulu angirerya (VHT) ngiripotio nguku ke-etic kec.

Nguna ejokak ka nguna edikino erokiata anakiyan ana.
Ayakau kon nege epedori aceepak akisicaluwar iyong etic kon ece ngolo anakuwar ana. Emam ibore ngini ajokan nooi iryamuni iyong nai nguna eripunio iwon ankiyan yok ikes ikingarakinete iwon asubakin ejok epite ngolo ebeit ngidakitarin ngulu angirerya kikobanariata ngiripotio ane anakapiripirit.

Etacit kon.
Emam etacit ngolo iryamuniiyong alotooma akiyan naga. Nai ilosi iyong aryamun ngisilinga ngalipyo ngatomon (10,000/=) ngulu ke-erot.

Nguna ka akerit nguna iyanio daadang.

Ani erai kicamu iyong ayakaun nakiyan na, nguna daadang ibongokini iyong iwayio kaakereru. Mam ngadi dang nguna elimorio kinga. Emam nyelimorio tar ekiro kon iwadio. Erai enamba bon ikiyenere iyong.

Kicamit ayakau nakiyan kori pa kicamit.

Erai yakau kon nakiyan ngin acamunet ngina ke-etau kon. Iyakar iyong apedorkon ayakaun nakiyan na kori ipedori akinger dang erai keya ngakiro nguna iyeni iyong ka emam ibore ngini aronon itiyakin neni kon. Iyakar nabo iyong apedor akinger abongonokin ngakingiseta nguna ikikarunito kori nguna nyicamit iyong.

Keya nguna etyoko kori icamit akingit.

Ani keya nguna etyoko kori icamit iyong kisileereunoi alotooma akiyan kori aripirip naga, ipedori iyong adolokin ngina epolokinit aripirip naga, Ms Elizabeth Babirye Katana, enamba keng; 0792-885-421. Anikeya nguna etapito ngapedorosyo kon alotooma akiyan naga ipedori iyong adolokin emalimu (prof.) Ponsiano Ocama ngolo epolokinit aryonget ngina ka aripirip ka nguna ke-ekitiyae ejok alo namba +256 772 421 190.

Acamunet ngina ke-ekabongonokinon.

Adau ayong akisyom kori akasyomakin ayong kaeketacaikin ayong daadang nguna eyakasi nabaruwa na. ayeni konaayong nguna itiyaere aripirip naga nguna elosio akitiya nguna etyoko, nguna ejokak ka ngapedorosyo kang alotooma akiyan na. alotooma akiciemakin abaruwa naga, emam nyabala ayong oyiu ekengitinitan antyokisyo nai akalimokinitae ayong aripirip n angina erai ayong elope ainakina.

Ebeit nai abaruwa na kigurunoi okoinakin ayong dang apei oting.

…… …… …… ……

Ekiro ngolo ke-ekabongonokinon. Ethei keng ka ngarwa nguna ke-elap.

…….. …… …….

Ekiro ngolo ke-esuuda, ethei keng ka ngarwa nguna ke-elap.

…… …… ……

Ekiro ngolo ke-ekengitingitan ethei keng ka ngarwa ngunake-elap.

TRANSLATED SEMI-STRUCTURED QUESTIONNAIRE FOR VHT PARTICIPANTS

Ngiboro ngulu eripiripiyere ka ingitare ngakiro

Erai ngini ingarakinit akaripiripan inges ekorakini ngabaruwae nu.

Toyai ekabongonokinon. Ikiseunitae iyong ayakau tooma nakisiom na angina eripiripiyere ngipitesyo ngulu ikobanariata ngidakitarin ngulu angirerya ngiripotio kec, nguna isipiyorito ikes akikobanar, nguna itapatanito ka ngunace nguna etapito ngiripotio kec anege a Nakapiripirit. Epolokinit akingitingito naga erae Ms Elizabeth Babirye Katana, ngina ebunit alomakerer alosukul angolo ka angaleu, ka neni esyomere nguna eyaununuyete ngidekesyo, enamba +256-792 88 5421, kori ipedori akigirar ane, lizkatna@gmail.com

Ikilipitae iyong abongonokin nguna iyeni iyong alotooma ngakingiseta nu.nguna daadang

ibongokini iyong, ingadao ka-akerit tomam alimor kinga..

1. enamba ngolo ka-atikit …….. ngarwa ke-elap …….
2. ekitela kori esabucounty……
3. eparish kon…….
4. Ere kon……
5. edakitar ngolo eapi…….
6. ethaa ngolo egeunere…….. ethaa ngolo egolokinere……

7. ngikaru ngulu ke-ekabongonokinon ……..

8. Irae aberu kori ekile? (toceta nguna iyookino)

   Ekile
   Aberu

9. Asyomit kon (toseu ngina iyookino)

   Nyasyomit
   Nakilasia ngakanikaarei (primary)
   Ngakilasya ngatomon kaapei (o-level) sinia.
   Ngakilasia ngatomon angauni (A-level) sinia
   Losukulo ngulu apolok ikwa ata makerere ngikosio
   Kori eya ngice (keyakasi, tolimo)…….

10. epite ngolo keekal (toseu nguna iyookino)

    Mam aberu kori ekile
    Eitarit, eyai abre kori ekile
    Epuserut kori apuserut

Keya ngace tolimo ……..

11. Aoyau ke etic kon ikwa edakitar ngolo ke-ere (VHT) ……..

12. etic kori elejilej ece akilo araakau edakitar (VHT ……..

13. Aponi ikitatami iyong etic ngol igeuni iyong a? (toseu ngina iryamara)

Aponi eketatami
Mam nyitatama
Kori eyangace…….

.

14. iryamunitor iyong aceekitatamet nabo (VHT training) adepar ngina esyaunan a? (toseu ngina iyookino.)

aryamunit
Nnyeryamuna
Keya ngace…….

15. ani kikitatamitere iyong anakisyakinet, ngarwa ngayai alotooma ekaru 2017?

……..
……..

.

16. ngitunga ngiyai eyakasi local kon?

…….

17. iyong ipolokinit ekal kon a? (toseu ngina iyookino)

Ayong apolokinit
Mere ayong
Kori ice…….

18. ani itamakini iyong, itemolkino,etyangisilinga iryamununui iyong alokal kon ai alotooma epei lap ?

…….

19. ngirerya ngiyai ingarakinit iyong kori ijaanakini iyong ikwa edakitar?

…….

20. ngikalya ngiyai ingarainit iyong kori ijaanakini iyong ikwa edkitar?

…….

21. Lowae ali eriamunitotor ngitunga alore kon akiyar? (toseungina iyookino)

Kidding, lowae ngolo angimomwa ka ngibaren
Nakook angimoru neni eyai ekidikidi ka ngibaren
Neni lapat neni eya ngibaren ka ekidikidi
Neni taere nginyomen daadang
Neni anginyomen ka ngibaren eya ngace a? (tolimo) ……

23. ebai edakitar alore kon ai?

……

24. alipite iyaanaria iyong ngiripotio kon lodakitar?

epikipik
Alosenen angakejen
amotoka
Aramanar asimu
Keyai epite ece…….

Nguna etapito abaru (epite ngolo eyakar ekal)

25. iyakar iyong ngiboro lu alokal kon a? (toceta nguna iyookino)

epikipik
egaali
amotoka
asimu
ekitanda
emesa
Akinanda kori aredio
esinema
afridge
A sola
Alait ngina enoki jwijwi
ecoron

26. alu baren kori ngityang itanit iyong alokal kon? (Tocieta ngoo iriamara)

Ngaatuk
Ngamee
Ngameesekin
Ngikokoroi
ngipegei
Keya ngice……..

27. Ai iryamununuia iyong ngakipi kotere ekal kon? (Tocieta nguna iryamara)

Ngakipi nguna eleleete anapaipoi

Nguna ka acuuma
nayonai/natapar
Nangolol
Namaatain
Others……..

28. Ani ingolikini iyong akai kon, aluboro idukitor iyong kidyaama keng? (Tocieta kiyookino)

Nganyiaa kori ka ecoto
Ngababat ka esimit
Keya ngace……..

29. ani bo aratatan idukit iyong ainyo? (Tocieta nguna iyookino)

nganyiaa
Ecoto ka ngipirin
Ngabulok nguna ngicunyuny
Ngabulok nguna ichunyitae nguna ke-ecoto
Nabulok nguna ke-esimit,ka nguna ke ecoto kicunyitetei
Keya ngace……..

TRANSLATED VHT FGDS TOPIC GUIDE

Nguna etupitae kotere akimor ngina angigurupo angulu angidakitarin angulu angirerya

Ngarwa nguna ke-elap ……..
Ekarikon/eketataman ……ekekaman ……..
Angajep ngina erworere …….
Esaa: ageunet …….. adaunet ……..

Ikienyunito ba/ iriyata ba daadang?
Ikijaunitae iyes daadang nege akiyan kaapei. Erai ekiro kang ……..ka lokone kang /nakone kang ngolo/ngina ekaman inges enyaritae……
Ikilakaraa isuwa neni kus acamun ayakau kaapei ka isuwa nege tokona. Ikilosi tokona akiyan kaapei ka iyes nguna etapito epite ngolo ikobanriata ngidakitarin ngulu angirerya ngiripotio kec anege anakapiripirit. Nguna nooi elosikinitoe anakiyan ana erai aripun nguna etyonikino ka nguna itapatanito ekikobe ngiripotio anege anakapiripirit nguna ikitapito nai iyes ikwa ngidakitarin ngulu angirerya (VHTs). Eyakar nginitunganan nguna etami inges ata kegelaananeni anguluce ka nguna daang einakinio akereru ngina apolon. Nguna daadang iyanio ane, iwayio emam alimor kinga. Ikamio nai eyokorwor naredio ka igrio nguna iyanio iwon daadnag kotere nyimuriakin ngadi. Iyookino nguna kori emam?
Ani nai kecayete ka kecamuna ngakiro nu, alakara nooi.
Kotere nai ikipedori akiyan emam ngace, itemokinon oanyunos iwon daadang ngulu ikiya nege.
Kaati tolimo ekiro keng.

Alipite ebeitori yong akikobanar eripot kon? Kiyanu mono iyong cenite.

1. Anu itami iyong kotere akikobanar ngiripotio? Alipite kona itami iyong atemar kikobanarere ngiripotio?In your opinion,
2. Iwa edakitar ngolo ke-ere,you ikiinakini iyong akikobanar ngiripotio?
3. Nyo ikiinit iyong akikobanar ngiripotio kon iriamara ka apaki ngina iitanitere?
4. Nyo ikiinanakini iyong akikobanar ngiripotio ileleba nguna iitana daadang?
5. Nyaanu nai jik nguna ikingarakinito iyong akikobanar eripot kon?
6. Anu bo itami iyong atemar eyaunto ngatyokisyo alotooma iyong akikobanar eripot kon?

7. Ani bo akonikwap, ikwa ngakirusio ka akolong anakapiripirit, ikingarakinito kori ikisipiyorito iyong akikobanar eripot a? kiyanu ceni mono ngun elalak nguna iyeni iyong.
8. Ani bo epite ngolo ka akiyar isikwaanitai ka akiyok ngibaren, iksingarakinit kori itotyonit ekikobe ngiripotio kon?
9. Nyaalu ngiboro ngice kori ngakiro ngace nguna iyeni iyong atemar ikingarakinito kori ikisipiyorito iyong akikobanar ngiripotio kon ikwa edakitar ngolo ke-ere ane anakapiripirit?
10. Ngaanu kona ngadi nguna ebeit kitiyae kitojokunere epite ngolo kikobanaret ngiripotio?

TRANSLATED PEER SUPERVISORS FGDS TOPIC GUIDE

Nguna etupakinete ngikemanimanak

Ngarwa nguna ke-elap ……..
Ekarikon/eketataman ……ekekaman ……..
Angajep ngina erworere …….
Esaa: ageunet …….. adaunet ……..

Ikienyunito ba/ iriyata ba daadang?
Ikijaunitae iyes daadang nege akiyan kaapei. Erai ekiro kang ……..ka lokone kang /nakone kang ngolo/ngina ekaman ines enyaritae……
Ikilakaraa isuwa neni kus acamun ayakau kaapei ka isuwa nege tokona. Ikilosi tokona akiyan kaapei ka iyes nuna etapito epite ngolo ikobanariata ngidakitarin ngulu angirerya ngiripotio kec anege anakapiripirit. Nguna nooi losikinitoe anakiyan anan erai aripun nguna etyonikino ka nguna itapatanito ekikobe ngiripotio anege anakapiripirit ikitapiot nai iyes ikwa ngidakitarin ngulu angirerya (VHTs). Eyakar nginitunganan nguna etami inges ata kegelaananeni anguluce ka nguna daang einakinio akereru ngina apolon. Nguna daadang iyanio ane, iwayio emam alimor kinga. Ikamio nai eykorwor naredio ka igrio nguna iyanio iwon daadnag kotere nyimuriakin ngadi. Iyookino nguna kori emam?
Ani nai kecayete ka kecamuna ngakiro nu, alakara nooi.
Kotere naiikipedori akiyan emam ngace, itemokinon oanyunos iwon daadang ngulu ikiya nege.
Kaati tolimo ekiro keng.

Alipite ebeitor iyong akikobanar eripot kon? Kiyanu mono iyong cenite.

1. Ikwa ngikemanimanak, alipite ebeitor nidakitarin kikobununuyeta ngiripotio? kiyanutu mono iyes ejok.

2. Anu itami iyong kotere akikobanar ngiripotio/elosi mono iges ejok a? itiyae mono ejok a?

3. Anu itami iyong kotere akikobanar ngiripotio? Alipite kona itami iyong atemar kikobanarere ngiripotio?In your opinion,

4. Anatamakinet kon, alipite ebeit kikobununuyere ngiripotio?
5. Ikwa ekemamanan nyo ikiini iyong atemar kerai ngidakitarin (VHTs) kikobut kori yaut ngiripotio?

6. Nyo ikiinanakini iyong atemar kerai ngiripotio daadang todolut atipei?
7. Nyo ikngarakini kori ikiinakini iyongatemar todolunito ngiripotio apak ngina iitanitere?
8. Ikokini ioyong iteyaunikori isikobu ngidakitarin(VHTs) ngiripotio ngulu ileleba ai?
9. Nyaanu nai jik nguna ithiingarakinito akikobanar ngiripotio angidakitarin?
10. Anu bo itami iyong atemar eyaunto ngatyokisyo alotooma iyong akikobanar eripot kon?
11. Ani bo akonikwap, ikwa ngakirusio ka akolong anakapiripirit, ikingarakinito kori ikisipiyorito iyong akikobanar eripot a? kiyanu ceni mono ngun elalak nguna iyeni iyong.
12. Ani bo epite ngolo ka akiyar isikwaanitai ka akiyok ngibaren, iksingarakinit kori itotyonit ekikobe ngiripotio kon?
13. Nyaalu ngiboro ngice kori ngakiro ngace nguna iyeni iyong atemar ikingarakinito kori ikisipiyorito iyong akikobanar ngiripotio kon ikwa edakitar ngolo ke-ere ane anakapiripirit?

14. Ngaanu kona ngadi nguna ebeit kitiyae kitojokunere epite ngolo kikobanaret ngiripotio

TRANSLATED PEER SUPERVISORS KIIs TOPIC GUIDE

Ngarwa nguna ke-elap ……..
Ekarikon/eketataman ……ekekaman ……..
Angajep ngina erworere …….
Esaa: ageunet …….. adaunet ……..

Ikienyunito ba/ iriyata ba daadang?
Ikijaunitae iyes daadang nege akiyan kaapei. Erai ekiro kang ……..ka lokone kang /nakone kang ngolo/ngina ekaman ines enyaritae……
Ikilakaraa isuwa neni kus acamun ayakau kaapei ka isuwa nege tokona. Ikilosi tokona akiyan kaapei ka iyes nuna etapito epite ngolo ikobanariata ngidakitarin ngulu angirerya ngiripotio kec anege anakapiripirit. Nguna nooi losikinitoe anakiyan anan erai aripun nguna etyonikino ka nguna itapatanito ekikobe ngiripotio anege anakapiripirit ikitapiot nai iyes ikwa ngidakitarin ngulu angirerya (VHTs). Eyakar nginitunganan nguna etami inges ata kegelaananeni anguluce ka nguna daang einakinio akereru ngina apolon. Nguna daadang iyanio ane, iwayio emam alimor kinga. Ikamio nai eykorwor naredio ka igrio nguna iyanio iwon daadnag kotere nyimuriakin ngadi. Iyookino nguna kori emam?
Ani nai kecayete ka kecamuna ngakiro nu, alakara nooi.
Kotere naiikipedori akiyan emam ngace, itemokinon oanyunos iwon daadang ngulu ikiya nege.
Kaati tolimo ekiro keng.

Alipite ebeitor iyong akikobanar eripot kon? Kiyanu mono iyong cenite.

1. Ikwa ngikemanimanak, alipite ebeitor nidakitarin kikobununuyeta ngiripotio? kiyanutu mono iyes ejok.

2. Anu itami iyong kotere akikobanar ngiripotio/elosi mono iges ejok a? itiyae mono ejok a?

2. Anu itami iyong kotere akikobanar ngiripotio? Alipite kona itami iyong atemar kikobanarere ngiripotio?In your opinion,

3. Anatamakinet kon, alipite ebeit kikobununuyere ngiripotio?
4. Ikwa ekemamanan nyo ikiini iyong atemar kerai ngidakitarin (VHTs) kikobut kori yaut ngiripotio?
5. Nyo ikiinanakini iyong atemar kerai ngiripotio daadang todolut atipei?
6. Nyo ikngarakini kori ikiinakini iyongatemar todolunito ngiripotio apak ngina iitanitere?
7. Ikokini ioyong iteyaunikori isikobu ngidakitarin(VHTs) ngiripotio ngulu ileleba ai?
8. Nyaanu nai jik nguna ithiingarakinito akikobanar ngiripotio angidakitarin?
9. Anu bo itami iyong atemar eyaunto ngatyokisyo alotooma iyong akikobanar eripot kon?
10. Ani bo akonikwap, ikwa ngakirusio ka akolong anakapiripirit, ikingarakinito kori ikisipiyorito iyong akikobanar eripot a? kiyanu ceni mono ngun elalak nguna iyeni iyong.
11. Ani bo epite ngolo ka akiyar isikwaanitai ka akiyok ngibaren, iksingarakinit kori itotyonit ekikobe ngiripotio kon?
12. Nyaalu ngiboro ngice kori ngakiro ngace nguna iyeni iyong atemar ikingarakinito kori ikisipiyorito iyong akikobanar ngiripotio kon ikwa edakitar ngolo ke-ere ane anakapiripirit?

13. Ngaanu kona ngadi nguna ebeit kitiyae kitojokunere epite ngolo kikobanaret ngiripotio

TRANSLATED FACILITY SUPERVISORS KIIs TOPIC GUIDE

Nguna etupakinete ngulu imanimanete ngidakitarin

Ngarwa nguna ke-elap ……..
Ekarikon/eketataman ……ekekaman ……..
Angajep ngina erworere …….
Esaa: ageunet …….. adaunet ……..

Ikienyunito ba/ iriyata ba daadang?
Ikijaunitae iyes daadang nege akiyan kaapei. Erai ekiro kang ……..ka lokone kang /nakone kang ngolo/ngina ekaman ines enyaritae……
Ikilakaraa isuwa neni kus acamun ayakau kaapei ka isuwa nege tokona. Ikilosi tokona akiyan kaapei ka iyes nuna etapito epite ngolo ikobanariata ngidakitarin ngulu angirerya ngiripotio kec anege anakapiripirit. Nguna nooi losikinitoe anakiyan anan erai aripun nguna etyonikino ka nguna itapatanito ekikobe ngiripotio anege anakapiripirit ikitapiot nai iyes ikwa ngidakitarin ngulu angirerya (VHTs). Eyakar nginitunganan nguna etami inges ata kegelaananeni anguluce ka nguna daang einakinio akereru ngina apolon. Nguna daadang iyanio ane, iwayio emam alimor kinga. Ikamio nai eykorwor naredio ka igrio nguna iyanio iwon daadnag kotere nyimuriakin ngadi. Iyookino nguna kori emam?
Ani nai kecayete ka kecamuna ngakiro nu, alakara nooi.
Kotere naiikipedori akiyan emam ngace, itemokinon oanyunos iwon daadang ngulu ikiya nege.
Kaati tolimo ekiro keng.

Alipite ebeitor iyong akikobanar eripot kon? Kiyanu mono iyong cenite.

1. Ikwa ngikemanimanak, alipite ebeitor nidakitarin kikobununuyeta ngiripotio? kiyanutu mono iyes ejok.

2. Anu itami iyong kotere akikobanar ngiripotio/elosi mono iges ejok a? itiyae mono ejok a?

2. Anu itami iyong kotere akikobanar ngiripotio? Alipite kona itami iyong atemar kikobanarere ngiripotio?In your opinion,

3. Anatamakinet kon, alipite ebeit kikobununuyere ngiripotio?
4. Ikwa ekemamanan nyo ikiini iyong atemar kerai ngidakitarin (VHTs) kikobut kori yaut ngiripotio?
5. Nyo ikiinanakini iyong atemar kerai ngiripotio daadang todolut atipei?
6. Nyo ikngarakini kori ikiinakini iyongatemar todolunito ngiripotio apak ngina iitanitere?
7. Ikokini ioyong iteyaunikori isikobu ngidakitarin(VHTs) ngiripotio ngulu ileleba ai?
8. Nyaanu nai jik nguna ithiingarakinito akikobanar ngiripotio angidakitarin?
9. Anu bo itami iyong atemar eyaunto ngatyokisyo alotooma iyong akikobanar eripot kon?
10. Ani bo akonikwap, ikwa ngakirusio ka akolong anakapiripirit, ikingarakinito kori ikisipiyorito iyong akikobanar eripot a? kiyanu ceni mono ngun elalak nguna iyeni iyong.
11. Ani bo epite ngolo ka akiyar isikwaanitai ka akiyok ngibaren, iksingarakinit kori itotyonit ekikobe ngiripotio kon?
12. Nyaalu ngiboro ngice kori ngakiro ngace nguna iyeni iyong atemar ikingarakinito kori ikisipiyorito iyong akikobanar ngiripotio kon ikwa edakitar ngolo ke-ere ane anakapiripirit?

13. Ngaanu kona ngadi nguna ebeit kitiyae kitojokunere epite ngolo kikobanaret ngiripotio

TRANSLATED DISTRICT FOCAL PERSONS KIIs TOPIC GUIDE

Nguna etupete ngulu epolokinito edistrict

Ngarwa nguna ke-elap ……..

Ekarikon/eketataman ……ekekaman ……..
Angajep ngina erworere …….
Esaa: ageun…….. adaunet……..

Ikienyunit ba/ iriyak ba ?
Ikijaunitae iyong nege akiyan kaapei ka isua. Erai ekiro kang ……..ka lokonekang /nakone kang ngolo/ngina ekaman inges enyaritae……

Ikilakaraa isuwa neni kon acamun ayakau kaapei ka isuwa nege tokona. Ikilosi tokona akiyan kaapei ka iyong nguna etapito epite ngolo ikobanariata ngidakitarin ngulu angirerya ngiripotio kec anege anakapiripirit. Nguna nooi elosikinitoe anakiyan anan erai aripun nguna etyonikinito ka nguna itapatanito ekikobe ngiripotio anege anakapiripirit totapito nai ngidakitarin ngulu angirerya (VHTs). Eyakar nginitunganan nguna etami inges ata kegelaananeni anguluce ka nguna daang einakinio akereru ngina apolon. Nguna daadang iyanio ane, iwayio emam alimor kinga. Ikamio nai eykorwor naredio ka igrio nguna iyanio iwon daadnag kotere nyimuriakin ngadi. Iyookino nguna kori emam?

Ani nai kecayete ka kecamuna ngakiro nu, alakara nooi.

Kotere naiikipedori akiyan emam ngace, itemokinon oanyunos iwon daadang ngulu ikiya nege.

Kaati elimori ekiro keng.

1. Alipite ebeit ngidakitarin gulu angirerya kikobununuyea ngiripotio?
2. Ani itamakini iyong, itiyae ekikobe ngol ejoka a?
3. Ani bo itamakini ioyng alipite ebeit kikobere ngiripotio?
4. Ikwa itungagan ngini itingit nguna angiripotio, nyo ikiini iyong atemar kerai ngidakitarin daadang yaut kori kikobut ngiripotio kec?
5. Ikwangina pei, ikokini ioyng itoyauni ngidakitarin(VHTs) daadang ngiripotio apak ngina iitanitere ai?
6. Ikokini iyong ingarakini ngidakitarin akikobun ngiripotio ngulu ileleba ejok ai?
7. Anu itami iyong atemar ithingarakinito ekiripotingae kori ekikobe ngiripotio?
8. Nyaanunguna itami iyong atemar eyaunitongatyokisyo kotere ekikobe ngolo angiripotio?
9. Ani bo akonikwap, ikwa ngakirusio ka akolong anakapiripirit, ikingarakinito kori ikisipiyorito iyong akikobanar eripot a? kiyanu ceni mono ngun elalak nguna iyeni iyong.
10. Ani bo epite ngolo ka akiyar isikwaanitai ka akiyok ngibaren, iksingarakinit kori itotyonit ekikobe ngiripotio kon?
11. Nyaalu ngiboro ngice kori ngakiro ngace nguna iyeni iyong atemar ikingarakinito kori ikisipiyorito iyong akikobanar ngiripotio kon ikwa edakitar ngolo ke-ere ane anakapiripirit?
12. Ngaanu kona ngadi nguna ebeit kitiyae kitojokunere epite ngolo kikobanaret ngiripotio